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June, 1970

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 67 No. 1

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President

ARKANSAS MEDICAL SOCIETY

1970-1971

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

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VOLUME 67 · JUNE, 1970 · NUMBER 1

PROCEEDINGS

94th Annual Session

ARKANSAS MEDICAL SOCIETY

Arlington Hotel, Hot Springs April 26 - 29, 1970

FIRST MEETING
HOUSE OF DELEGATES

The first meeting of the House of Delegates convened at 1:15 P.M. on Sunday, April 26th, 1970, in Room "C" of the Arlington Hotel Conference Center with Speaker of the House Amail Chudy presiding.

Invocation was by W. Payton Kolb of Little Rock.

The Executive Vice President, Mr. Schaefer, called the roll of delegates. The following delegates, officers, and members seated as delegates by action of the House were present: ARKANSAS, R. H. Whitehead; ASHLEY, Donald L. Toon; BAXTER, John F. Guenthner; BENTON, James L. Pickens; BOONE, Rhys A. Williams; BRADLEY, J. W. Marsh; CHICOT, John P. Burge; CLARK, Eli Gray; CLEBURNE, William M. Wells; COLUMBIA, Charles L. Weber; CRAIGHEAD-POINSETT, John B. Kirkley, M. E. Blanton, Charles G. Swingle; CRAWFORD, M. C. Edds; CRITTENDEN, Keith B. Kennedy; DALLAS, Jack T. Dobson; DESHA, Guy U. Robinson; DREW, A. K. Busby; GARLAND, William R. Mashburn, John Trieschmann; GRANT, Curtis B. Clark; GREENE-CLAY, Asa A. Crow; HEMPSTEAD, Jim McKenzie; HOT SPRING, Robert H. White; HOWARD-PIKE, M. H. Wilmoth; INDEPENDENCE, Jim E. Lytle; JEFFERSON, Ross E. Maynard, R. Teryl Brooks; JOHNSON, Guy P. Shrigley; LAWRENCE, J. B. Elders; LEE, E. C. Fields; LINCOLN, Richard C. Petty; LITTLE RIVER, James D. Armstrong; LOGAN, W. Duane Jones; LONOKE, Fred C. Inman, Jr.; MILLER, Allie E. Andrews, Jr.; OUACHITA, J. B. Jameson, Jr.; POPE-YELL, Charles F. Wilkins, Jr., Roy I. Millard; PULASKI, F. R. Buchanan, James L. Smith, Frank Padberg, Robert Watson, Gilbert O. Dean, John McC. Smith, Frank Westerfield, G. Thomas Jansen, John Satterfield, Winston K. Shorey, Fred O. Henker, III, Frederick J. Kittler, James R. Weber, Guy Farris, John T. Herron, and George Mitchell; SALINE, Donald L. Viner; SEARCY, John A. Hall; SEBASTIAN, Kemal Kutait, Carl Williams, Annette Landrum, Neil Crow, A. C. Bradford; SEVIER, James I. Balch: UNION, George C. Burton, Larkin Wilson; WASHINGTON, Morriss M. Henry, Lee B. Parker, Jr., Robert A. Etherington; WHITE, John E. Bell; COUNCILORS, Bascom P. Raney, Paul Gray, Hugh R. Edwards, Dwight W. Gray, L. J. Pat Bell, Raymond Irwin, Wayne Lazenby, Kenneth R. Duzan, George F. Wynne, Karlton Kemp, John P. Wood, James C. Bethel, W. Payton Kolb, William S. Orr, Stanley Applegate, Henry V. Kirby, C. C. Long, A. S. Koenig; PRESIDENT, Ross Fowler; PRESIDENT-ELECT, Jack W. Kennedy; FIRST VICE PRESIDENT, John P. Price, Jr.; SPEAKER, Amail Chudy; VICE SPEAKER, Charles F. Wilkins, Jr.; SECRETARY, Elvin Shuffield; TREASURER, Ben N. Saltzman; PAST PRESIDENTS, L. A. Whittaker, Joe Verser, H. W. Thomas.

The Credentials Committee—composed of Dwight W. Gray, chairman; Frank M. Westerfield and Neil E. Crow—reported that there were 56 delegates present, constituting a quorum.

Speaker Chudy introduced Mrs. Carl W. Parkerson, president of the Woman's Auxiliary to the Arkansas Medical Society, who spoke briefly reviewing the activities of the Auxiliary during the past year. The president-elect of the Auxiliary, Mrs. C. Lynn Harris of Hope, was

also introduced to the House.

Speaker Chudy gave recognition to Richard C. Petty of Star City, secretary of the Lincoln County Medical Society, for having submitted the first county society secretary's report for 1970.

Speaker Chudy called on the president of the Society, Ross Fowler of Harrison, who was accorded a standing ovation. Dr. Fowler made the following address to the House:

ADDRESS OF THE PRESIDENT

It has been a privilege, a pleasure, and a responsibility to serve as the 93rd president of the Arkansas Medical Society.

Our theme for the year was to lead, guide, and direct for better health care of our patients.

For your untiring efforts in working for this objective, I wish to thank all of you physicians and especially the members of the Council and the various committees. Many man hours have been willingly donated to very difficult problems and very little recognition or appreciation has been shown you. These efforts must be continued and multiplied if any semblance of the private practice of medicine is to survive.

I wish to also thank our Executive Vice President, Mr. Paul Schaefer, and his loyal staff for their valuable information and assistance. They make any Arkansas Medical Society president a better president.

The Arkansas Woman's Auxiliary is, without a doubt, the most vital, loving and loyal supporter any Society could have. They are so effective and efficient we are asking them for more of their efforts so as to improve AMA-ERF and ARK-PAC.

The members of the Boone County Medical Society most graciously gave adequate and quality medical care to my patients when I was

Jack W. Kennedy of Arkadelphia takes oath of office of President of the Society. Standing with Dr. Kennedy are: W. R. Brooksher of Fort Smith, a Past President of the Society; Mrs. Louis K. Hundley of Little Rock, a Past President of the Auxiliary; and Mrs. Kennedy, who is also a Past President of the Auxiliary. The oath is administered by Ross Fowler of Harrison, outgoing President. Inaugural Banquet, April 28, 1970.

away. I am further convinced that "A friend in need is a friend indeed."

The Arkansas Medical Society has taken an active and supporting role in many activities. They joined with the Legislative Council to sponsor an educational program on Drug Abuse, working with civic clubs, P.T.A. organizations, news and T.V. media to bring the problem before the public.

The Society co-sponsored a most informative and successful Emergency Health Conference.

A mass, state-wide rubella measles vaccination program was postponed on the advice of the Immunization Committee. I hope this can be achieved at a later date.

The Legislative Committee, with Elvin Shuffield as chairman, had a very active and effective year working with our State legislators and members of the Constitutional Convention.

A Traffic Safety Resolution was presented to Colonel Ralph Scott, commending the Arkansas State Police for the reduction of traffic fatalities in Arkansas in 1969.

An entire day was divided up into individual conferences with each of our Senators and Congressman in Washington, before the AM-PAC meeting there. With the able assistance of Mr. Paul Schaefer, our problems and positions on health care were conveyed to them. After having these extensive discussions, we felt this exchange of ideas was beneficial to all of us. Arkansas was well represented at the AMA meetings in New York and Denver and the AM-PAC meeting in Washington.

The Senior Medical Day Social Hour and Banquet sponsored by the Medical Society was very pleasant and well received. Dr. Edward Annis gave an excellent, interesting, and instructive address.

Meetings were held with members of SAMA, and although there was a marked divergence of views on the best system of health care by some

The gavel, symbol of the office of President of the Arkansas Medical Society, passes from Ross Fowler of Harrison to Jack W. Kennedy of Arkadelphia. Inaugural Banquet, April 28, 1970.

members of SAMA and the Arkansas Medical Society, it was felt that a better relationship was established by meeting together and discussing our different opinions.

The Medical Society was well represented and received a very warm welcome at the Registered Nurses' State Meeting, the Licensed Practical Nurses' State Meeting, and the Cancer Society meetings.

Many hours have been spent with the Governor's Council on Health Care, Comprehensive Health Planning, Health Task Forces, Arkansas Regional Medical Program, Rehabilitation, county medical societies, and other organizations. The Executive Committee and the Chairman of the 21-Physician Committee have met once a month with the Welfare Department and once a month with Blue Cross-Blue Shield. The 21-Physician Committee has responded with nearly 100% attendance at every called meeting. Although this committee has not satisfied all members of the Medical Society, they tried to represent the Society to the best of their ability. Many hours and much thought have been devoted to Medicaid, U.C.R. fees, Utilization and Welfare Medical problems. There have been a few abuses of U.C.R. fees and a few cases of over-utilization in the State. The Executive Committee and the 21-Physician Committee have endeavored to adjudicate these abuses in a fair and impartial way, with as little fanfare as possible. We think it is much better for this to be the responsibility of the Medical Society than a Federal agency.

I commend the House of Delegates for making

Jack W. Kennedy addresses the membership in accepting the office of President. Inaugural Banquet, April 28, 1970.

the Executive Committee a part of the 21-Physician Committee. I think this will give more representation and information to members all over the state. I recommend a rotation of the members of the 21-Physician Committee and representation of each councilor district on it.

The most difficult problems in my term as president have been the question of over-utilization, physicians' fees, and the adverse publicity we are receiving. Twenty-four Federal Departments and Agencies support health care programs. These departments of health services appoint many biased committee members and members from institutions receiving Federal grants. From these sources, along with Labor Unions and news media, have come the adverse publicity phrases such as (1) our "Non-System of Health Care," (2) "Immoral to charge a fee for health services," and (3) "Flagrant abuse of Medicare and Medicaid by Physicians."

Although the physicians nationally get only 13% of the Medicaid dollar and probably a closely-related amount of the Medicare dollar, they are getting 99% of the bad publicity for the Government's underestimation of cost and utilization of these programs.

Many politicians, labor leaders and sociologists are in favor of violent and untested changes in the health care system for power rather than better health care of the patient.

Virtually every nation in the world faces a health care crisis and doctors from all over the world are desiring to practice medicine under our system of health care.

Contrary to the propaganda for a change in care, there is nothing in our system of health care that education and increased health manpower will not correct. More government control of medicine will only continue to increase utilization, aggravate the manpower shortage and increase the cost.

For the public to receive adequate medical

Jack W. Kennedy of Arkadelphia is sworn is as President of the Society at the Inaugural Banquet on Tuesday, April 28, 1970.

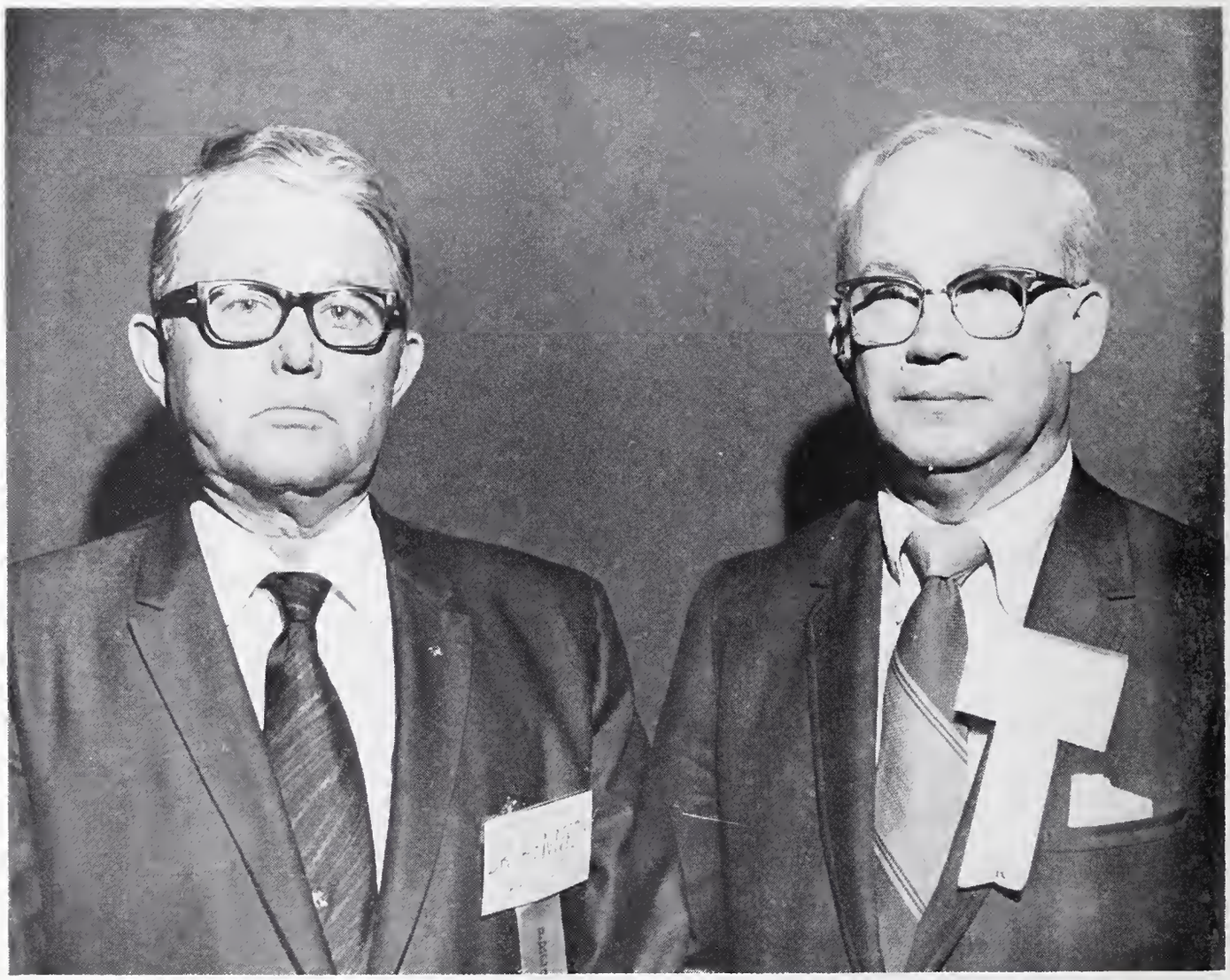
care and to avoid unnecessary utilization of health personnel, it must be properly educated in nutrition, proper preparation of food, mental health, child and maternity health care, rehabilitation, mental retardation, long-term care, sanitation, pollution, emergency care, immunization, dental and personal hygiene, and all other public health problems. Probably the most important in this public education would be: (1) prevention of disease and accidents, and (2) early recognition of diseases and seeking early treatment.

To increase the health manpower, we must educate and train more medical and paramedical personnel. The medical schools must take more qualified students, increase their facilities and faculties, use their training facilities more efficiently with more hours a day and more days of a year. The training of 90% of the medical school graduates as specialists should be adjusted to train more general practitioners in less time and with less use of facilities. A 4% increase in physicians' efficiency would be equal to an increased graduation of 11,000 doctors and should be encouraged.

We must strive for the best possible medical care for all people, to protect our freedom and to maintain our democratic form of government.

AM-PAC and the State PAC organization are taking a very active role in electing Senators and Congressmen favorable to organized medicine and the medical profession. They are keeping informed on all medically related bills being presented before Congress and are expressing our views to their legislators.

I urge you and your wives to join AM-PAC and ARK-PAC, to talk to our Senators and Congressmen concerning the critical and often false reports being released by Government Departments and Agencies. Only through a united effort can we preserve the good image the medical profession has enjoyed.



The President and President-elect of the Arkansas Medical Society for 1970-71, Jack W. Kennedy of Arkadelphia (left), and Stanley Applegate of Springdale.

During the past year, I have traveled many thousands of miles and attended many meetings with many divergent groups of people, each concerned with the problem of health care. I have learned much and I hope I have been able to represent you and contribute something of the thinking of this Medical Society to these people. I have enjoyed serving as your president, and I thank you for the honor.

* * *

Speaker Chudy introduced the immediate past president of the Arkansas Chapter of the Student American Medical Association, Mr. Donald C. Thompson, who addressed the House as follows:

THE PHYSICIAN: PUBLIC SERVANT OR PRIVATE PRACTITIONER

Ladies and gentlemen (in just 35 days, it will be fellow physicians), I thank you for the opportunity to come before you today, as I did last year, representing the Arkansas Chapter of the Student American Medical Association. Last year, I told you what SAMA was doing nationally. I understand from the many comments that filtered back to me following my talk, that you were concerned regarding what I had said SAMA was doing. Well, gentlemen, SAMA is still at it. And, today, rather than go over what our local chapter is doing, I've placed my report on the table in the rear of the room. It's to be published in the Journal of the Arkansas Medical Society at a later date, so if you don't get a copy today, you can read it there. But, today, I want to briefly let you know why we are doing what we are doing, both locally and nationally—and, I speak for both as a member of the Executive Council of National SAMA and as the 1969-70 president of Arkansas SAMA.

I want you to know that, like most Americans, we are seeking answers to monstrously large problems. We are not consciously endeavoring to blaspheme modern medicine, the AMA, the Arkansas Medical Society, or anyone else. We are simply trying to find answers to questions like:

The officers of the Society form a receiving line for the Council-hosted reception on Sunday, April 26, 1970. Reading from left they are: Elvin Shuffield, Little Rock, Secretary; Mrs. Shuffield; Jack W. Kennedy, Arkadelphia, President-elect; Mrs. Kennedy; Ross Fowler, Harrison, President; Mrs. Fowler; and John P. Wood, Mena, Chairman of the Council.

"What is the physician's role in the decade ahead?"

"Why do so many people needlessly die in America?"

"Why do physicians not go into black neighborhoods?"

"Why aren't there enough doctors to supply the demand?"

"Why do the armed forces have enough doctors and a town of 900 in Utah must have a pharmacist to practice medicine?"

"What are the roles of the allied health professions in tomorrow's medicine?"

"Is the physician in the future to be a public servant or a private practitioner?"

"Is Uncle Sam (alias Big Brother) really lying when he denigrates and maligns the private sector of medicine?"

These questions and many more are ones I hear every day from students in school at the University of Arkansas Medical Center. They're also heard from all over the country. We are convinced that as health professionals, neophyte physicians to be sure, our major goal is the same as yours: to provide the best possible health care to all people in the most effective, efficient and inexpensive manner possible. And, students today who are striving to believe in the traditional principles and goals of medicine are becoming more and more confused and frustrated than ever before.

We're hearing from every side that the private practice of medicine based on fee for service is in serious jeopardy, that prepaid group practice is the only way to go, that the federal and state government will take a larger part in the practice of medicine. And, it would appear that the handwriting is on the wall.

Private medicine is cooperating with Medicare and Medicaid and all the other programs of our government in an effort to make them work. But, won't this lead to medicine eventually being controlled through its pocketbook even more than it is now? The students are seeing this and some are becoming convinced that absolute government control—total socialization of medicine, if you will—is the way it's going. Is this the right approach? Are we to believe our eyes? Is it just that the moderate voice is squelched by the efforts of the Washington planners? And, do the planners have the peoples' best interest at heart or are they trying to destroy our whole society and are just starting with the traditionally most powerful political group? Some of the biggest names in medicine today are on Walter Reuther's Committee of 100!

It would appear that the physician of the future will be more or less forced to assume the position that health is a basic human right. And, the young physician today has inculcated into him by the various medical journals that medical education should be changed from a disease-oriented science to a health-oriented humanistic endeavor.

*He is told that "the physician, both singly and collectively, is going to have to provide solutions to what the public perceives as the problems in medical care: namely—costs, quality, and equality."**

One would think, and it's commonly told, that the student is led away from private medicine in general and family medicine in particular by the faculties of the medical schools. However, in discussion with our preceptees who return to school, we find that there are also a large number of students who are "turned off" by private physicians stressing aspects of medicine other than the basic reasons that they're in practice, i.e., the opportunity to deliver health care and assume the responsibility for one's own actions.

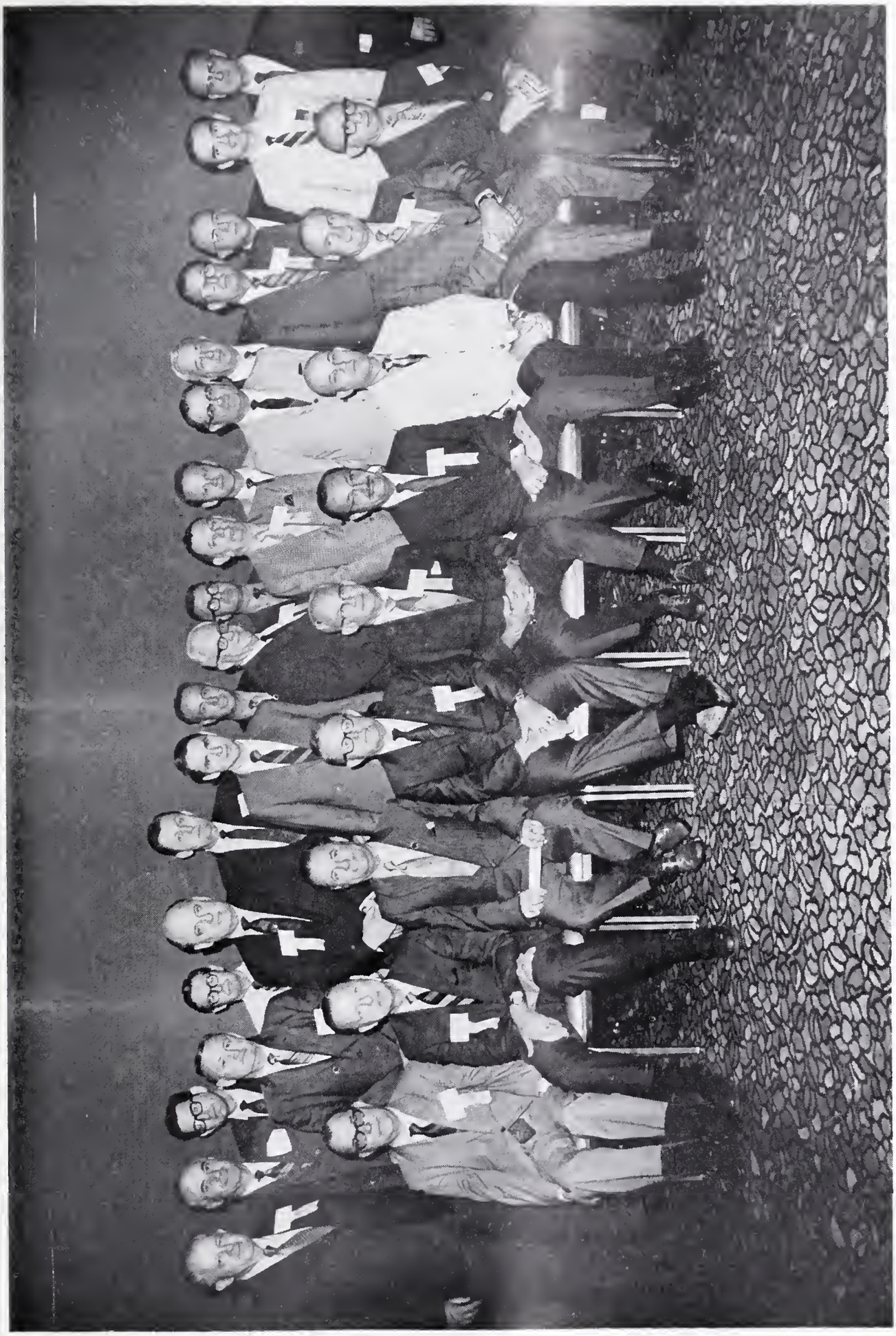
But even with all this, there is an upsurge in the student movement in an effort for the student to get on the inside and learn about and influence what is happening, instead of letting it happen to him. Even conservative and moderate students like myself are beginning to "want a piece of the action." We are not the radical types that dwell in the realms of the Black United Youth, the Students for a Democratic Society, the Weathermen (the most militant faction of the SDS), the Black Panthers, or even the Student Health Organization. We are students who believe in the age old saying:

My country, right or wrong
When right, to be kept right, and
When wrong, to be made right.

And, the belief is that there are many legitimate wrongs in our society today that need correcting.

The urge is to "rush out and correct them." However, we realize that we are not only neophytes in our profession, but that we are also neophytes in our society. We need help and guidance through the maze of word tangles emanating from all directions.

* Knowles, John, "The Physician in the Decade Ahead," Hospitals (J.A.H.A.), Vol. 44, p. 57, 1970.



The Council of the Arkansas Medical Society for 1970-71. Reading from left to right, seated, are: Councilor Paul Gray, Chairman of the Council C. C. Long, Secretary Elvin Shuffield, President Jack W. Kennedy, President-elect Stanley Applegate, Treasurer Ben N. Saltzman, Speaker Amari Chudy, Past Presidents Ross Fowler and H. W. Thomas; standing, left to right: Councilors Henry V. Kirby, C. Lynn Harris, Raymond Irwin, Eldon Fairley, Bascom Raney, George Wynne, L. J. Pat Bell, Wayne Lazenby, Dwight Gray, W. Payton Kolb, Kenneth R. Duzan, William S. Orr, Jr., James C. Bethel, A. S. Koenig, Karlton Kemp, Hugh Edwards, Past President L. A. Whittaker, Councilor Morris Henry, and Past President C. R. Ellis.

If we are to understand the practice and economics of private medicine and of private hospitals, we need to see these things firsthand. We need private practitioners and private hospitals to make spaces available for students in all five years to learn what medicine is all about. We need to be included on the various committees of the Arkansas Medical Society and the Arkansas Academy of General Practice. And, the student needs to be invited to attend the county medical society meetings to see how these various groups operate. In short, the student must be included in the workings of the medical societies or he will become more and more divorced from private medicine.

I humbly bring these things before you today. I beseech you to act on them, even if it requires a change in your constitution. You must show the student that you want him so he will not be led away from you by those who would do so.

And, in closing, I would like to invite you to our SAMA Distinguished Lecturer Series at the Medical Center so that you may hear both Dr. Edward Kowalewski, president of the American Academy of General Practice, who will speak on Thursday, April 30th, 1970, at 4:00 P.M. in the Medical Center Auditorium, and Dr. Roger O. Egeberg, Assistant Secretary for Health and Scientific Affairs in the Department of Health, Education and Welfare, who will speak at 2:30 P.M. on May 6, 1970, at the Medical Center Auditorium.

Too, I would ask that should you have any questions this year concerning my talk that before too much speculation is allowed that you pay me the courtesy of asking me back to clarify whatever points need elaboration. I assure you that I shall make every effort to return to Hot Springs to speak with you.

* * *

Upon the motion of Ben Saltzman and Roy Millard, the House adopted the minutes of the 93rd Annual Session of the Arkansas Medical Society as published in the June 1969 issue of the Journal of the Arkansas Medical Society.

Upon the motion of George F. Wynne and Gilbert O. Dean, the House adopted the minutes of the special session of the House of Delegates held on November 23, 1969, as published in the March 1970 issue of the Journal of the Arkansas Medical Society.

John P. Wood, chairman of the Council, gave the following report of actions of the Council of the Society since publication of the annual report in the March issue of the Journal:

REPORT OF THE COUNCIL

Mr. Speaker and members of the House of Delegates, the Council of the Arkansas Medical Society met on Sunday, March 15, 1970, and transacted the following business:

1. *The report of the AMA Committee on Planning and Development (known as the Himler Report) and the Minority Report of the committee submitted by Dr. Budd were analyzed in sections by Raymond Irwin, George Wynne, L. J. Pat Bell, William S. Orr, Jr., Kenneth R. Duzan, and Stanley Applegate. After hearing the analyses of the reports of these men, the Council voted to receive the report for information.*
2. *The treasurer, Ben Saltzman, presented the annual report of audit. The Council accepted and approved the report.*
3. *Discussed the selection of twelve persons to serve on the Ark-Pac Board of Directors. The Executive Vice President was directed to write all members of the Medical Society soliciting Ark-Pac dues and advising them that appointments to the Ark-Pac board of directors would be made by the Council during the Annual Session.*
4. *After discussion, the Council voted to discontinue the Committee on Long Range Planning for the Arkansas Medical Center.*
5. *Approved payment of the House Speaker's expense to a meeting in New Orleans.*
6. *President Fowler described a visit by himself and Mr. Schaefer to the offices of the Congressmen and Senators in Washington during an AM-PAC meeting in that city. Mr. Schaefer stated that he had been informed that Medicaid would be federalized during 1970. This would mean standardization of fees and benefits and control from a federal office rather than from within the State.*

The Council met on Sunday, April 5, 1970, and transacted the following business:

1. *Approved Executive Committee action authorizing a reception for Dr. Roger Egeberg on May 5th.*
2. *The Council approved the appointment of Ben Saltzman, H. W. Thomas, L. A. Whittaker, Stanley Applegate, and Mr. Paul C. Schaefer as trustees of the Arkansas Medical Society Pension Trust Fund.*

Chairman of the Council John P. Wood presides at the Monday morning breakfast meeting of the Council of the Arkansas Medical Society, April 27, 1970.

Ross Fowler is congratulated for his outstanding year as President of the Society and presented a plaque of appreciation by the new President, Jack W. Kennedy.

Serious consideration is given to problems confronting the Council of the Arkansas Medical Society, headed by Chairman John P. Wood of Mena, April 27, 1970.

3. *Approved the appointment of James Weber of Jacksonville to represent the Arkansas Medical Society on the Arkansas Health Careers Council.*
4. *Approved travel expenses for Mr. Eugene Warren to attend a conference of Medical Society legal counsel to be held in Chicago in September.*
5. *Heard Dr. Baden and Mr. Elliott speak on their new program of computerized collection of statistics on fees and medical services. The Council voted that the information be received and that county societies be notified that the information is available to them.*
6. *Voted to turn over AMA-ERF activities in Arkansas to the Woman's Auxiliary to the Arkansas Medical Society.*
7. *Took no action on a proposal to endorse the new Constitution for the State of Arkansas.*

* * *

The Speaker referred the report of the Council to Reference Committee Number Two.

The Speaker called for reports from committees. Elvin Shuffield, chairman of the Committee on Medical Legislation, reported on activities of his committee. The House gave Dr. Shuffield a standing ovation for the tremendous amount of work he did in connection with the special session of the Legislature and the Constitutional Convention.

Speaker Chudy called on the chairman of the Constitutional Revisions Committee, Lee B. Parker, Jr., for the final reading of amendments to the By-Laws proposed during the 1969 meeting. The House gave final approval to the following revisions in the Society By-Laws:

AMENDMENTS TO BY-LAWS

1. *Amend By-Laws, Chapter VIII, Committees, Section 1 (A) by adding as standing committees:*
   12. *Committee on Aging*
   13. *Committee on Mental Health*
   14. *Committee on Continuing Education*
2. *Amend By-Laws, Chapter VIII, Committees, by:*
   (A) *Deleting the words "and postgraduate work" from parentheses following listing of Committee 4 under Section 1 (A) so that it will read:*
   4. *Committee on Medical Education (Medical School)*
   (B) *Deleting the words "the study of the aging population through a subcommittee on aging" from Section 5.*
   (C) *Deleting the words "and postgraduate instruction" from the first sentence of Section 6.*
3. *Amend By-Laws, Chapter VIII, Committees, by:*
   (A) *Adding Section 13. Committee on Aging*
   The Committee on Aging shall study the problems of the aged and the aging. It shall provide leadership and initiative in meeting the health and medical care requirements of older persons. It shall foster the development of effective methods of achieving the best possible social and spiritual atmosphere for the elderly.
   (B) *Adding Section 14. Committee on Mental Health*
   The Committee on Mental Health shall study the problems of the mentally ill. It shall foster development of programs to improve the care and treatment of mental patients and mental retardates.
   (C) *Adding Section 15. Committee on Continuing Education*
   The Committee on Continuing Education shall consist of ten members, one from each councilor district. The Committee shall exercise leadership and responsibility in continuing review of the system of graduate medical education. It shall foster continuous efforts to increase excellence in the system of graduate education to serve the cause of medicine and to assure the public of continuing improvement in the graduate training of physicians in practice.
4. *Amend the By-Laws, Chapter XI, to delete the words "Robert's Rules of Order" and substitute "Sturgis Rules of Parliamentary Procedure."*

* * *

Speaker Chudy asked for objections to adoption of the proposed amendments. There being none, he declared the amendments approved and adopted.

Speaker Chudy then called on Dr. Parker for the initial reading of additional revisions in the Constitution and By-Laws. Dr. Parker presented the following proposed amendments:

The Inaugural Banquet, Ballroom, Arlington Hotel, Tuesday, April 28, 1970.

Auxiliary officers were special guests at the Inaugural Banquet on Tuesday, April 28, 1970. Reading clockwise, from the left: Dr. Carl W. Parkerson of Hot Springs; Mrs. Harold D. Langston of Little Rock, President-elect of the Woman's Auxiliary to the Arkansas Medical Society; Mrs. H. J. Tanner of Little Rock; Mrs. Hal Dildy of North Little Rock; Mrs. Gordon W. Peck of Baton Rouge, Louisiana, President of the Woman's Auxiliary to the Southern Medical Association; Mrs. C. Lynn Harris of Hope, President of the Woman's Auxiliary to the Arkansas Medical Society; Dr. Harris; and Mrs. Carl Parkerson, immediate Past President of the Woman's Auxiliary to the Arkansas Medical Society.

The President and President-elect of the Woman's Auxiliary to the Arkansas Medical Society for 1970-71, Mrs. C. Lynn Harris of Hope (left) and Mrs. Harold D. Langston of Little Rock.

PROPOSED AMENDMENTS
(First Reading)

1. *Amend Chapter VIII, Committees, Section 1 (A) 3 to delete the words "Liaison with Public Health Department." This would serve to eliminate the Sub-Committee on Liaison with the State Board of Health as recommended at the 1969 Annual Session.*
2. *Amend Chapter I, Membership, Section 7 (Military Members) to read as follows:*
   Section 7. (A) Regular members of the Arkansas Medical Society who are in the service of the armed forces of the United States, not as career officers, may be classified as military members, and carried on the rolls of their respective county societies as such. Military members shall have a waiver of dues during the time of service, provided that they are in good standing at the time they entered the armed forces. Military members shall enjoy full membership privileges and certificates of membership shall be issued to them for each year.
   Section 7. (B) Young physicians going from internship or residency to military service shall be granted military membership with dues exemption, provided the request for such membership is transmitted through a component society. Such military membership shall be on an annual basis only. The requirement for active membership prior to exemption shall be waived for such military members. Such members shall enjoy full membership privileges except that they may not vote or hold office, and certificates of membership shall be issued to them. This section shall not be construed to mean that military membership may be granted to those physicians who enter military service after a period of active practice during which time they were not members of the Society.

* * *

Speaker Chudy referred these proposed amendments to Reference Committee Number Three for consideration.

Joe Verser of Craighead-Poinsett County, discussed licensure of osteopaths and made the following proposals:

As a compromise, we would propose an Amendment to our Medical Practice Act which would permit the Medical Board to accept for licensure and an unlimited license those osteopaths who have had a one-year internship or residency in a hospital approved by the Council on Medical Education of the American Medical Association. I would further propose that the Osteopathic Board be abolished and the six osteopaths now practicing in the State be permitted to practice medicine in Arkansas.

* * *

Speaker Chudy referred the proposal to Reference Committee Number Three.

Speaker Chudy then called attention to the members of the House to the following resolutions which had been received after publication of the March issue of the Journal but prior to the twenty-day deadline for receipt of business items for consideration by the House:

RESOLUTION RE: IDENTIFICATION OF ETHICAL PRINCIPLES
FROM: UNION COUNTY MEDICAL SOCIETY

WHEREAS, the Arkansas Medical Society has not developed a system of medical ethics designed to guide physicians in matters involving "third party" participation in the traditional doctor-patient relationship; and

WHEREAS, third party participants frequently seek and demand private medical information in such a manner as to interfere with patients' rights of privacy; and

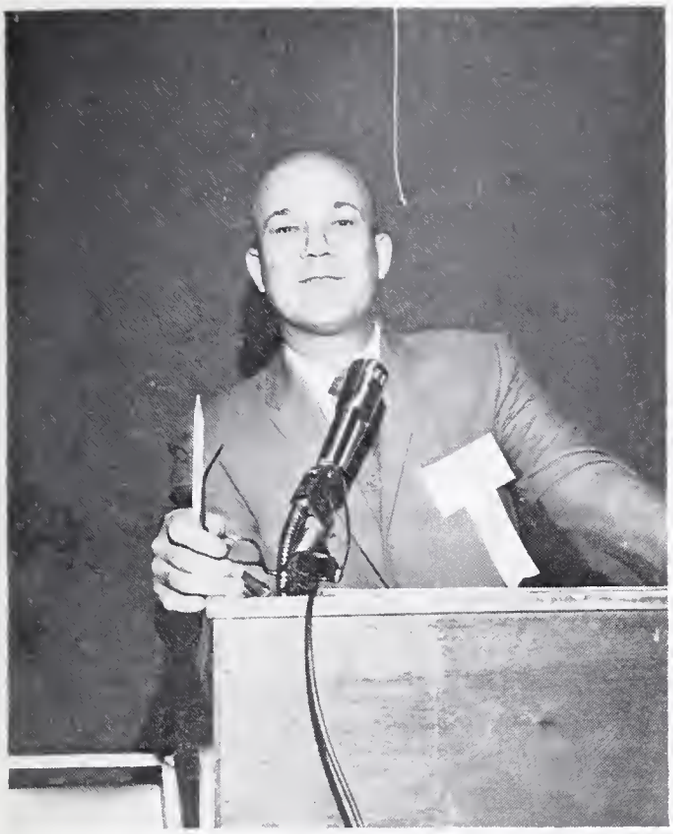
WHEREAS, these third party demands frequently interfere with the medical judgment and discretion of physicians and block these physicians from fulfilling their responsibility to protect patient privacy; and

WHEREAS, infinitely broad and cruelly comprehensive medical authorizations are currently required of Medicare participants if these citizens are to receive monetary benefits under Public Law 89-76; and

WHEREAS, the American Medical Association has not developed a system of medical ethics designed to guide physicians in matters involving third party participation in the traditional doctor-patient relationship; now

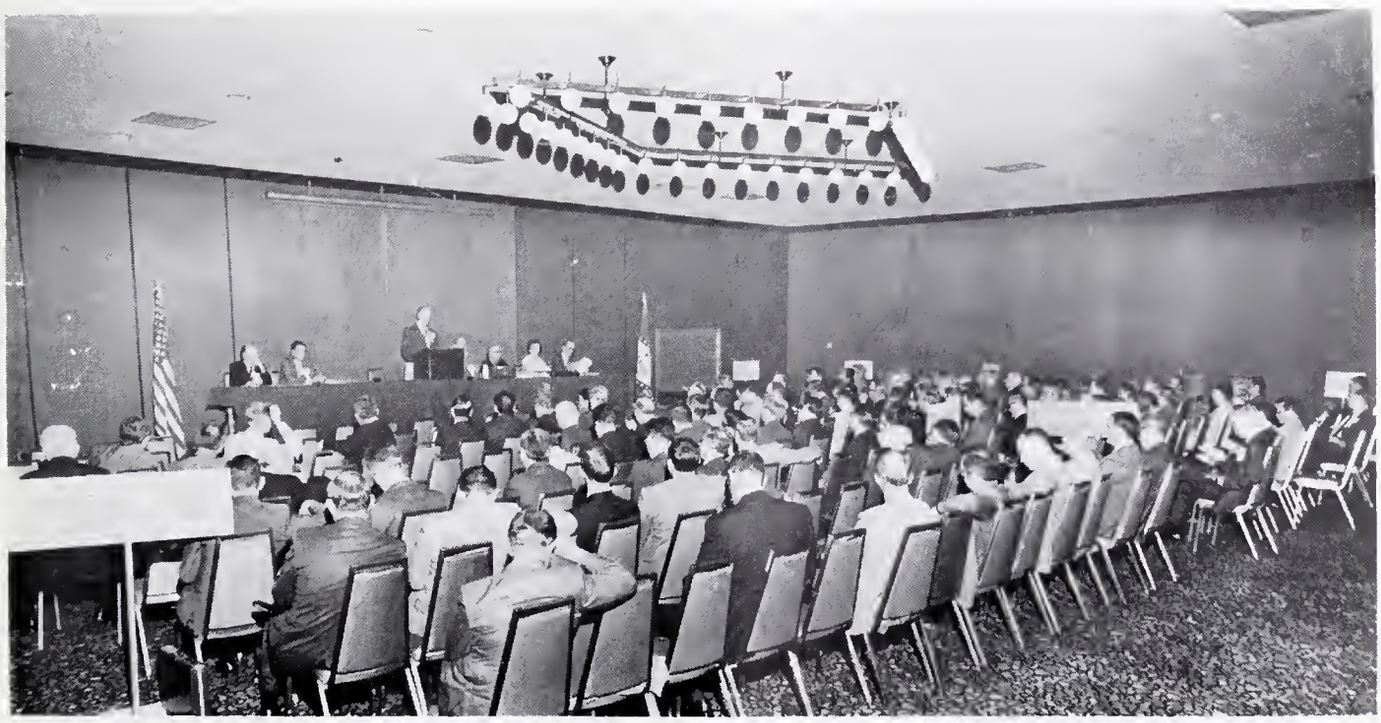
BE IT RESOLVED, that the Arkansas Medical Society immediately charge its officers and Council with the responsibility of evolving an ethical system, based upon presently existent ethical concepts of the American Medical Association and of the Arkansas Medical Society, regarding the rights and duties of physicians in their involvement with third party interests, whether private or governmental; and

BE IT FURTHER RESOLVED, that the Ar-



Speaker of the House of Delegates Amail Chudy presides at the first session of the House on Sunday, April 26, 1970.

President of the Society Ross Fowler of Harrison makes his "Address of the President" at the first meeting of the House of Delegates, Sunday, April 26, 1970.



The House of Delegates of the Arkansas Medical Society in session on April 26, 1970. Unusually good attendance by delegates and other voting members of the House was noted at this year's meeting.

kansas Medical Society immediately initiate action to cause the American Medical Association to develop an ethical code specifically designed to guide physicians in ethical responses to requests for private medical information from third party interests, whether private or governmental; and to inform the membership of AMA whether or not the "Guidelines" of federal and state governmental agencies supersede State Medical Laws and the Principles of Medical Ethics of the AMA.

* * *

Speaker Chudy referred this resolution to Reference Committee Number One.

RESOLUTION RE: SAFETY CAPS FOR MEDICATIONS
FROM: CENTRAL ARKANSAS PEDIATRICS SOCIETY

WHEREAS, poisoning accidents in children are a major health problem; and

WHEREAS, child-protective safety medicine containers can prevent a significant number of such accidents; and

WHEREAS, these same containers are not only effective but convenient and relatively inexpensive;

NOW, THEREFORE, BE IT RESOLVED, that the Arkansas Medical Society supports dispensing by pharmacists of all medications in child-protective containers, and encourages acceptance of the containers by parents; and

BE IT FURTHER RESOLVED, that the Arkansas Medical Society delegates to the American Medical Association be instructed to request that the AMA aid in attaining widespread utilization of the containers by physicians and pharmacists.

* * *

Speaker Chudy referred this resolution to Reference Committee Number Three.

RESOLUTION RE: 21-MAN COMMITTEE
FROM: PULASKI COUNTY MEDICAL SOCIETY

WHEREAS, in establishing the Twenty-One Man Committee, the Council of the Arkansas Medical Society made no provision as to the length of time its members may serve; and

WHEREAS, in the best interest of Arkansas physicians, some provision should be adopted to provide for a rotation of the members of this Committee;

BE IT FURTHER RESOLVED, that the House of Delegates of the Arkansas Medical Society recommends that the Council provide for some rotation of the membership of this Committee.

* * *

Speaker Chudy referred this resolution to Reference Committee Number One.

Speaker Chudy then announced meetings of the reference committees and urged members to attend and to participate in discussions concerning the various reports and resolutions.

The Speaker also announced that meetings of all members of the Society in the Second, Fourth and Fifth Congressional Districts would be held immediately following adjournment of the House to select nominees for district positions on the Arkansas State Medical Board and the Arkansas State Board of Health.

Speaker Chudy then announced that the selection of the nominating committee for election of officers for the ensuing year would be made.

Delegates from the various councilor districts held meetings on the floor and selected the nominating committee as follows:

First District: Joe Verser, Harrisburg
Second District: Hugh R. Edwards, Searcy
Third District: Fred C. Inman, Jr., Carlisle
Fourth District: H. W. Thomas, Dermott
Fifth District: George F. Wynne, Warren
Sixth District: Karlton Kemp, Texarkana
Seventh District: W. R. Mashburn, Hot Springs
Eighth District: James L. Smith, Little Rock
Ninth District: Morriss Henry, Fayetteville
Tenth District: L. A. Whittaker, Fort Smith

The first meeting of the House of Delegates adjourned at 2:30 P.M.

SCIENTIFIC SESSIONS

The First Vice President of the Society, J. P. Price, Jr., of Monticello, presided at the scientific session on Monday morning. The program opened with a showing of the film "The Technique of Intra-Articular and Peri-Articular Injection." The program of lectures was as follows: "Office Urology," Robert K. Rhamy, Professor and Chairman, Division of Urology, Vanderbilt University School of Medicine, Nashville, Tennessee; "Newer Trends in the Treatment of Human Infertility," Charles B. Hammond, Assistant Professor, Department of Obstetrics and Gynecology, Duke University Medical Center, Durham, North Carolina; "What Can Surgery Do for Acquired Heart Disease?", Grady L. Hallman, Jr., Texas Heart

The head table at the Inaugural Banquet on Tuesday, April 28, 1970. From left to right at the head table are: Mrs. Elvin Shuffield; Dr. Elvin Shuffield, Little Rock, Secretary; Mrs. Jack W. Kennedy; Dr. Jack W. Kennedy, President-elect; Dr. Ross Fowler, Harrison, President; Mrs. Fowler; Dr. John P. Wood, Mena, Chairman of the Council; Mrs. Wright Hawkins, Fort Smith; Dr. Wright Hawkins, Chairman of the Convention Committee; Dr. Joseph A. Norton, Little Rock, a Past President. In the left foreground are members of the family and special guests of the President-elect Jack W. Kennedy and in the right foreground are members of the Clark County Medical Society and Auxiliary.

Relatives of the new President of the Arkansas Medical Society at the Inaugural Banquet on Tuesday, April 28, 1970, included (clockwise from left) Mrs. Fran Oster; Mr. and Mrs. Lyman Lamb, Little Rock; Mr. Fran Oster, Fort Worth; Mrs. Ben Dallas Means, Little Rock; Dr. W. A. Lamb, Little Rock; and Mrs. Morris Elder, Mount Ida.

Members of the Clark County Medical Society at the Inaugural Banquet on Tuesday, April 28, 1970. Reading from left, clockwise, they are: Dr. and Mrs. Charles Clark of Arkadelphia; Mrs. Lewis B. Tilley of Arkadelphia, Dr. and Mrs. R. H. Nunnally of Gurdon, and Dr. and Mrs. Wallis Ross of Arkadelphia.

Institute, Houston, Texas; "Consideration of the Surgical Patient with Cardiovascular Disease," M. Jerome Strong, Associate Professor of Anesthesiology, Baylor College of Medicine, Houston, Texas; "Medical Support of Aerospace Flight," Duane Catterson, Deputy Director of Medical Research and Operations, National Aeronautics and Space Administration, Manned Space Craft Center, Houston.

Joseph L. Rosenzweig, Hot Springs, second vice president of the Society, presided at the scientific session on Monday afternoon. Jack Stevens, Professor of Surgery and Chief of the Section of Orthopedics, University of Chicago Hospital and Clinics, Chicago, Illinois, spoke on "A Surgeon's View of Arthritis"; William D. Davis, Jr., Head of the Department of Internal Medicine and Chief of the Section of Gastroenterology, Ochsner Clinic, New Orleans, Louisiana, spoke on "The Problem of Hepatitis in a General Hospital"; Alson E. Braley, Professor Emeritus and Past Chairman of the Department of Ophthalmology of the University of Iowa College of Medicine in Iowa City, Iowa, discussed "Corneal Eye Banks"; John M. Dennis, Professor and Head of the Department of Radiology of the University of Maryland School of Medicine, Baltimore, Maryland, talked on "Granulomatous Ileocolitis"; Robert K. Rhamy, Professor and Chairman of the Division of Urology, Vanderbilt University School of Medicine, Nashville, discussed "Urinary Tract Infection."

A showing of a film entitled "X-ray, Ultrasound and Thermography in Diagnosis" opened the scientific program on Tuesday morning. The third vice president of the Society, A. C. Bradford of Fort Smith, presiding. The program consisted of the following lectures: "Hyperthyroidism: Present Concepts, Diagnosis and Management," Delbert A. Fisher, Professor of Pediatrics of the University of California School of Medicine, Los Angeles, California; "The Management of Chronic Hepatitis," William D. Davis, Jr., Head of the Department of Internal Medicine, Chief of the Section of Gastroenterology, Ochsner Clinic, New Orleans, Louisiana; "Evaluation of the Dizzy Patient," Wallace Rubin, Associate Professor of the Department of Otolaryngology, Tulane University School of Medicine, New Orleans, Louisiana; "The Immediate and Long Range Effects of the Certifying Board in Family Practice," Edward J. Kowalewski, President, American Academy of General Practice, Akron, Pennsylvania.

RELATED MEETINGS

The Association of Tumor Clinic Staff Members in Arkansas met on Monday in the Arlington Hotel with Paul L. Mahoney, Jr., of Harrison, Arkansas, Association Chairman, presiding. Charles B. Hammond of Durham, North Carolina, was guest speaker.

The Eye, Ear, Nose and Throat Section of the Arkansas Medical Society held an all-day meeting in the Arlington Hotel on Tuesday. Speakers included J. Forrest Henry of Little Rock; Alson E. Braley of Iowa City, Iowa; Mr. Max Woolly of Little Rock; and Wallace Rubin of New Orleans.

The Arkansas Orthopaedic Society met for a luncheon program on Tuesday at the Hot Springs Rehabilitation Center with Jack Stevens of Chicago as guest speaker.

The Arkansas Radiological Society met on Tuesday for a luncheon, business meeting, and scientific program with John M. Dennis of Baltimore as guest.

The Urology Section of the Society met on Tuesday for a luncheon. Following a business session, a scientific program was presented consisting of a lecture by Dr. Robert K. Rhamy of Nashville, Tennessee, and a pyelogram conference.

The Arkansas Chapter of the American Academy of Pediatrics held a luncheon program meeting on Tuesday. Speakers included Delbert A. Fisher of Los Angeles; Sam Boellner of Little Rock; William G. Crook of Jackson, Tennessee;

HAWAIIAN LUAU, MAJESTIC HOTEL, APRIL 27, 1970

These lovely ladies greeted guests with leis and entertained with their hula dances.

Dr. and Mrs. J. B. Elders of Walnut Ridge are welcomed to the luau.

Dr. Jim Lytle and Mrs. Roy Millard receive the traditional "Aloha" welcome at the Hawaiian luau.

There was a lavish buffet for the Hawaiian luau.

Punch was served on the sun deck of the Majestic prior to the Hawaiian feast.

THE INAUGURAL BANQUET ON TUESDAY, APRIL 28, 1970

Dr. James J. Pappas of Little Rock (left) receives cash award for his first place scientific exhibit. The presentation was made by Charles W. Logan of Little Rock, chairman of the Scientific exhibits.

Dr. Ross Fowler, Harrison, presides at the Inaugural Banquet.

Dr. Martin Eisele, secretary of the Medical Education Foundation for Arkansas, presents $5,000 check to Dr. Winston K. Shorey, Dean of the University of Arkansas School of Medicine.

Dr. Ross Fowler, Society President, presents $7,492.40 from the American Medical Association Education and Research Foundation to Dean Winston K. Shorey of the University of Arkansas School of Medicine.

Halcuit Moore of Dallas, Texas; and T. E. Townsend of Pine Bluff.

The Arkansas Society of Internal Medicine held business sessions, a luncheon with scientific lecture by William D. Davis, Jr., of New Orleans, and a panel program composed of Mr. Richard Norton of the Ozarks Regional Commission, Dean Winston Shorey of the University of Arkansas School of Medicine, Mr. Marvin Altman, hospital administrator of Fort Smith; Mr. Ed Rensch, Director of the State Health Planning Program, and Mr. Len Blaylock, Welfare Commissioner. Ross Fowler, president of the Medical Society, presided at the panel program.

The Arkansas Chapter of the American College of Surgeons held a luncheon meeting on Tuesday with Grady Hallman, Jr., of Houston as guest speaker.

The Arkansas Academy of General Practice held a two-hour scientific session on Tuesday afternoon with Edward J. Kowalewski, president

of the American Academy of General Practice, as speaker.

The Arkansas Society of Pathologists held a luncheon meeting on Tuesday, followed by a business meeting.

The Arkansas Society of Anesthesiologists held a scientific session on Tuesday afternoon with M. Jerome Strong of the Baylor College of Medicine as speaker.

A meeting of obstetricians and gynecologists was held at lunch on Tuesday with Charles B. Hammond of Durham, North Carolina, as guest speaker.

OTHER ACTIVITIES

The Council of the Society hosted a reception on Sunday evening for all members of the Society and their guests. The reception afforded an opportunity for members to become acquainted with the officers of the Society and was a very pleasant affair.

On Monday evening, the members of the Society went to the Majestic Hotel for a Polynesian feast. There was no bar, but a Hawaiian punch was served. The food was complimented by all who attended. The party was an informal meeting enjoyed by all.

The Society hosted a breakfast for members of the Fifty Year Club on Tuesday, April 28th. The following members of the club were present: A. D. Cathey, G. Allen Robinson, William A. Hudson, R. H. Whitehead, C. W. Hall, D. L. Owens, G. C. Coffey, H. King Wade, Sr., J. W. Morris, Charles Garratt, E. J. Chaffin, O. A. Smith, Mac McLendon, F. J. Scully, J. H. McCurry, D. W. Goldstein, and R. C. Dickinson.

The past presidents of the Arkansas Medical Society were guests of the Society for a breakfast on Wednesday, April 29th. Present were: Ross Fowler, H. W. Thomas, L. A. Whittaker, C. R. Ellis, Joe Verser, William A. Snodgrass, W. R. Brooksher, T. Duel Brown, Joseph A. Norton, and H. King Wade, Sr.

The annual golf tournament was played at the Hot Springs Country Club. The winners of the tournament were announced at the banquet by Richard F. Graham, tournament chairman. Medalist trophy went to Ed Allis of Little Rock. The first place trophy was won by Mack Moore of Little Rock; Dr. Allis also won the second place trophy; and third place went to W. G. Selakovich of Little Rock. Other winners were Jack Young of Little Rock, John Joyce of Little Rock, Johnson Baker of Little Rock, W. A. Ross of Arkadelphia, Charles G. Swingle of Marked Tree, and Paul G. Henley of El Dorado.

A poolside cocktail party preceded the inaugural banquet on Tuesday evening.

PRESIDENT'S INAUGURAL BANQUET

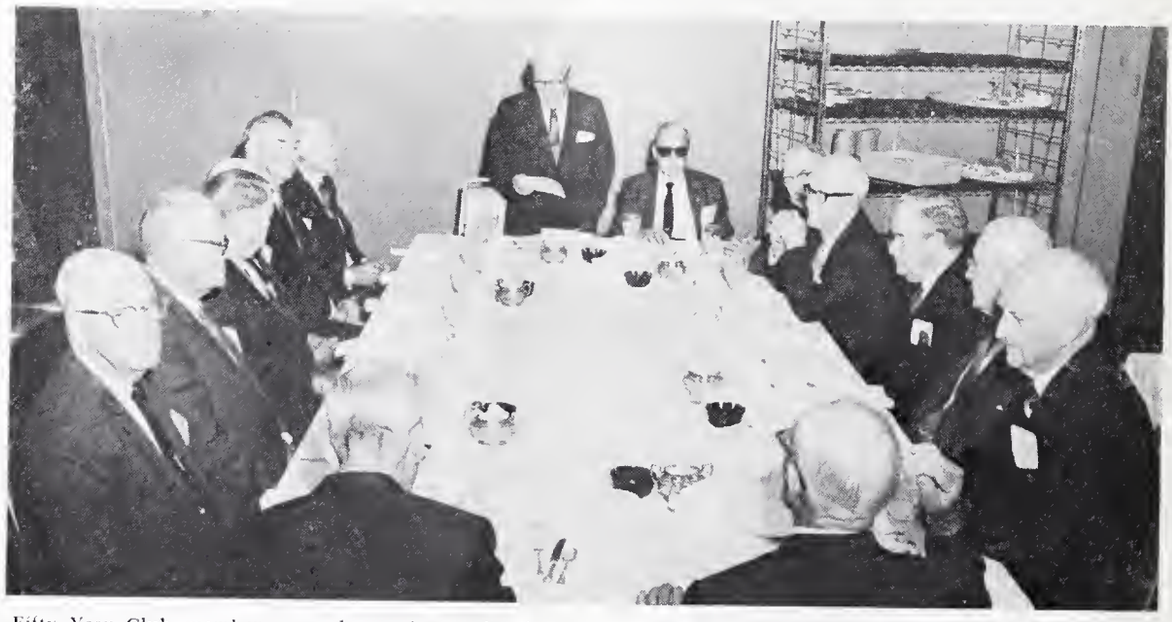
The President's Banquet was held on Tuesday evening, April 28th, in the Ballroom of the Arlington Hotel with the Society president, Ross Fowler of Harrison, presiding.

The invocation was by Joseph Norton of Little Rock, a past president of the Society.

President Fowler introduced those seated at the head table as follows: Joseph Norton, Little Rock; Wright Hawkins, Fort Smith, chairman of the Convention Committee, and Mrs. Hawkins; John P. Wood, Mena, Chairman of the Council of the Society; Mrs. Fowler; Jack W. Kennedy, Arkadelphia, president-elect, and Mrs. Kennedy; Elvin Shuffield, Little Rock, secretary of the Society, and Mrs. Shuffield.

Other special guests introduced by President Fowler were: Mrs. Gordon W. Peek, President of the Woman's Auxiliary to the Southern Medical Association, Baton Rouge, Louisiana; Mrs. C. Lynn Harris, President of the Woman's Auxiliary to the Arkansas Medical Society, and Dr. Harris, Hope; Mrs. Carl Parkerson, Immediate Past President of the Woman's Auxiliary to the Arkansas Medical Society, and Dr. Parkerson, Hot Springs; Mrs. Harold Langston, president-elect of the Woman's Auxiliary to the Arkansas Medical Society, Little Rock; Mrs. Vera Stemmle, President, Arkansas State Medical Assistants

Past Presidents of the Arkansas Medical Society were honored at a breakfast on Wednesday, April 29, 1970. Present were (seated, left to right): H. W. Thomas, Joe Verser, Ross Fowler, T. Duel Brown; standing, left to right: C. R. Ellis, H. King Wade, Sr., L. A. Whittaker, W. R. Brooksher, Wm. A. Snodgrass, and Joseph A. Norton.



The Fifty Year Club members were honored at a breakfast on Tuesday, April 28, 1970. Those present at the breakfast were: A. D. Cathey, G. Allen Robinson, Wm. A. Hudson, R. H. Whitehead, C. W. Hall, D. L. Owens, H. King Wade, Sr., J. W. Morris, Charles Garrett, E. J. Chaffin, O. A. Smith, Mac McClendon, F. J. Scully, J. H. McCnrry, D. W. Goldstein, R. C. Dickinson, and George C. Coffey.

Mrs. C. Lynn Harris of Hope (left) and some of the officers who will serve with her during her year as President of the Auxiliary (left to right): Mrs. Carl Nash of Pine Bluff, Southeast Vice President; Mrs. Robert Nnnnally of Gurdon, Southwest Vice President, and Mrs. W. Myers Smith of North Little Rock, Treasurer.

Society, Pine Bluff; Mr. Michael Elliott, President of the Arkansas Chapter, Student American Medical Association, and Mrs. Elliott, Little Rock; Mr. Donald C. Thompson, immediate past president of the Arkansas Chapter of SAMA, and Mrs. Thompson, Little Rock.

President Fowler called attention to the beautiful decorations for the banquet and expressed thanks and appreciation to Mrs. Louis K. Hundley who had planned them.

The chairman of the scientific exhibits, Charles Logan, expressed appreciation to the physicians who had prepared exhibits for the meeting and announced that prize money had been made available by Eaton Laboratories. The exhibit on "Modern Otology—Team Approach" by James J. Pappas and Michael E. Winston, M.A., was named winner of the first place award. The exhibit on "Total Hip Prosthetic Replacement" by R. Barry Sorrells and Philip H. Johnson of Little Rock received honorable mention.

On behalf of the American Medical Association Education and Research Foundation, President Fowler presented a check for $7,492.40 to Winston K. Shorey, Dean of the University of Arkansas School of Medicine, for use of the school.

Martin Eisele, representing the Board of Directors of the Medical Education Foundation for Arkansas, presented to Dean Shorey a check for $5,000 for the Medical School's student loan fund.

President Fowler read the names of past presidents of the Arkansas Medical Society and asked those present to stand. Those in attendance at the banquet were H. King Wade, Sr., of Hot Springs; W. R. Brooksher of Fort Smith; T. Duel Brown of Little Rock; William A. Snodgrass, Jr., of Little Rock; H. King Wade, Jr., of Hot Springs; Joe Verser of Harrisburg; C. R. Ellis of Malvern; L. A. Whittaker of Fort Smith; Joseph A. Norton of Little Rock; and H. W. Thomas of Dermott.

President Fowler asked President-elect Jack W. Kennedy of Arkadelphia to step to the rostrum. He then asked Mrs. Kennedy, Mrs. Louis K. Hundley and W. R. Brooksher to stand with Dr. Kennedy for the inaugural ceremony. These individuals are members of the four physician-wife teams who have served as president of their respective organizations. L. J. Kosminsky (deceased) served as president of the Arkansas Medical Society in 1933-34. Mrs. Kosminsky (who now lives out of state) served as president of the Woman's Auxiliary to the Arkansas Medical Society in 1943-44. Dr. Brooksher was president of the Society in 1954-55 and Mrs. Brooksher (deceased) was president of the Auxiliary in 1931-32. Dr. Hundley (deceased) was president of the Society in 1958-59 and Mrs. Hundley was president of the Auxiliary in 1949-50. Mrs. Kennedy served as president of the Auxiliary in 1957-58.

Dr. Fowler administered the oath of office of president of the Arkansas Medical Society to Jack W. Kennedy of Arkadelphia. Dr. Kennedy introduced members of his family present, his special guests, and members of the Clark County Medical Society and Auxiliary. Dr. Dolphus Whitten presented to Dr. Kennedy a citation from Oklahoma City University in recognition of his work as a physician, civic leader, and as an all-around good citizen. Dr. Kennedy's remarks in accepting the office of president are entitled "Third Man Theme" and printed elsewhere in this issue.

On behalf of the Society, Dr. Kennedy presented to Dr. Fowler a plaque expressing the appreciation of the Society for his service to the medical profession and to the people of Arkansas. In accepting the plaque, Dr. Fowler expressed pleasure at having served as president of the Society and thanked the membership for the honor.

The banquet ended at 9:00 P.M.

MEMORIAL SERVICE

A joint Memorial Service of the Arkansas Medical Society and the Woman's Auxiliary to the Arkansas Medical Society was held on Tuesday, April 28th, in the Ballroom of the Arlington Hotel. The president of the Society, Ross Fowler of Harrison, presided.

Invocation was by The Right Reverend Monsignor James Gaffney of St. Mary's Catholic Church in Hot Springs.

COUNCIL HOSTED RECEPTION FOR MEMBERSHIP, SUNDAY, APRIL 26, 1970

The reception hosted by the Council on Sunday evening, April 26, 1970, gave the members a chance to renew acquaintances of colleagues across the State and discuss Medical Society affairs with the officers.

Dr. Fowler read the names of the following members of the Society who died during the past year:

J. W. Amis, Fort Smith
R. V. Bennett, Hot Springs
Morgan C. Berry, Malvern
E. J. Brown, Mansfield
H. Clay Chenault, Hot Springs
Owen H. Clopton, Rector
M. C. Crandall, Wilmot
J. K. Donaldson, Little Rock
William E. Gray, Hot Springs
E. C. Gresham, Crossett
Harvey J. Hall, Clinton
P. Leo Hathcock, Fayetteville
William C. Hays, Jr., Marianna
Jacob B. Hesterly, Prescott
G. W. S. Ish, Sr., Little Rock
Isaac R. Johnson, Blytheville
James M. Kolb, Sr., Clarksville
Virgle E. Lyons, North Little Rock
J. A. Martin, Lake City
Travis Mathews, Hazen
S. P. McConnell, Booneville
Ben D. Means, Little Rock
W. H. Moreland, Tyronza
Theodore C. Panos, Little Rock
Thomas G. Price, Wynne
E. A. Purdum, Hot Springs
Howard A. Rands, Dumas
Phillip G. ReMine, Fort Smith
Euclid M. Smith, Hot Springs
John A. Thompson, Dermott
L. B. Tilley, Arkadelphia
Jesse T. Wood, Fountain Hill

Mrs. Carl Parkerson, president of the Woman's Auxiliary, read the following list of names of deceased members of the Auxiliary:

Mrs. W. H. Bollinger, Charleston
Mrs. W. R. Brooksher, Fort Smith
Mrs. Willis E. Brown, Little Rock
Mrs. Pelham McGehee, Sr., Lake Village
Mrs. W. W. Lowe, Gillett
Mrs. Ross Van Pelt, Eureka Springs

Mrs. Frances Lynch of Hot Springs sang "How Great Thou Art" and "The Lord's Prayer," accompanied by Mrs. Leona Diedrich of Hot Springs.

The Memorial Address was given by G. Thomas Jansen of Little Rock.

MEMORIAL ADDRESS

G. THOMAS JANSEN

Members of the Arkansas Medical Society and friends, it is an honor to have been asked to give this memorial address at the 94th session of the Arkansas Medical Society. The preparation of this address gave me time to reflect and recall those of the Society and Auxiliary who have died during this past year.

It has been said that we all understand death for the first time when he puts his hand on one whom we love, and your presence here underscores this love and understanding. The men and women whom we honor have all been dedicated to medicine in some way. This should encourage us to recall what it is in medicine that inspires this devotion—

We are of noble ancestry—
We are of solidarity,
directed toward a correlation of knowledge to observe life and death in all of its phases, normal and obtuse—

We are progressive
in our applications of this knowledge to relieve disease—

We are of the art and humanism,
never forgetting that a touch or understanding gaze must convert our correlated knowledge into the wisdom of care and caring.

Such is the recollection of those we love, and recollection like this is the only paradise from which we cannot be turned out.

Some are so afraid to die that they never begin to live, not so with the physician who shares death as a common companion in his routine. The physician realizes that this final experience brings every human to his most pure individuality—to the intense contemplation of that deepest and most solemn of all relations—the relation between the creator and his creation. Our understanding of this aspect of death brings to us the joy of our heritage, the joy that this last effort is the beginning of another life.

I now want all of us to reflect in silence. Spirit your mind to that personal commemoration you have in your memory.

Following the Memorial Address, The Right Reverend Monsignor James Gaffney pronounced the benediction.

FINAL MEETING

HOUSE OF DELEGATES

Speaker of the House Amail Chudy called the final meeting of the House of Delegates to order at 10:00 A.M. on Wednesday, April 29th, in Room "C" of the Arlington Hotel. He called on Guy U. Robinson of Dumas for the invocation.

The Executive Vice President, Mr. Schaefer, called the roll of members. The following delegates, officers and members seated as delegates by action of the House were present:

ARKANSAS, R. H. Whitehead; ASHLEY, James D. Rankin; BAXTER, John F. Guenthner; BENTON, James L. Pickens; BOONE, Rhys A. Williams; CHICOT, John P. Burge; CLARK, Eli Gray; CLEBURNE, William M. Wells; CRAIGHEAD-POINSETT, John B. Kirkley, Charles G. Swingle, Joe Verser; CRAWFORD, M. C. Edds; DALLAS, Jack T. Dobson; DESHA, Guy U. Robinson; GARLAND, C. W. Parkerson, John Trieschmann; HEMPSTEAD, Jim McKenzie; HOT SPRING, C. R. Ellis; HOWARD-PIKE, M. H. Wilmoth; INDEPENDENCE, Jim E. Lytle; JEFFERSON, Ross E. Maynard, R. Teryl Brooks; LEE, E. C. Fields; LOGAN, W. Duane Jones; LONOKE, Fred C. Inman, Jr.; MILLER, R. M. Bransford; MISSISSIPPI, Frank Rhodes; NEVADA, H. Blake Crow; OUACHITA, James Guthrie; PHILLIPS, J. H. Barrow; POPE-YELL, Charles F. Wilkins, Jr., Roy I. Millard; PULASKI, James L. Smith, Frank Padberg, John McCullough Smith, Curry B. Bradburn, Frank Westerfield, G. Thomas Jansen, Charles R. Henry, John Satterfield, Winston K. Shorey, James R. Weber, David Newbern, Guy Farris, J. A. Harrell, Fred Kitler, George Mitchell, Purcell Smith; SALINE, Donald L. Viner; SEBASTIAN, William G. Lockhart, Kemal Kutait, Carl Williams, Neil Crow, A. C. Bradford; UNION, Jacob Ellis, WASHINGTON, Morriss Henry, Lee B. Parker, Jr., Robert A. Etherington; WHITE, John E. Bell; COUNCILORS, Eldon Fairley, Bascom P. Raney, Paul Gray, Hugh R. Edwards, Dwight W. Gray, L. J. Pat Bell, Raymond Irwin, Wayne Lazenby, Kenneth R. Duzan, George F. Wynne, Karlton H. Kemp, John P. Wood, James C. Bethel, Robert F. McCrary, W. Payton Kolb, William S. Orr, Stanley Applegate, Henry V. Kirby, C. C. Long, A. S. Koenig; PRESIDENT, Jack W. Kennedy; FIRST VICE PRESIDENT, John P. Price, Jr.; SPEAKER, Amail Chudy; VICE SPEAKER, Charles F. Wilkins, Jr.; SECRETARY, Elvin Shuffield; TREASURER, Ben N. Saltzman; PAST PRESIDENTS, L. A. Whittaker, Joe Verser, Charles R. Henry, W. A. Snodgrass, Jr., H. W. Thomas, Ross Fowler.

Speaker Chudy called for the report of the Nominating Committee. L. A. Whittaker, chairman of the Nominating Committee, gave the following report:

REPORT OF THE NOMINATING COMMITTEE

The Nominating Committee—composed of Joe Verser, Hugh Edwards, Fred Inman, H. W. Thomas, George F. Wynne, Karlton Kemp, W. R. Mashburn, James L. Smith, Morriss Henry, L. A. Whittaker—met and selected the following slate of officers:

For President-elect—
William A. Snodgrass, Little Rock
Stanley Applegate, Springdale
For First Vice President—
Wright Hawkins, Fort Smith
For Second Vice President—
Porter Rodgers, Jr., Searcy
For Third Vice President—
D. L. Owens, Harrison
For Treasurer—
Ben N. Saltzman, Mountain Home
For Secretary—
Elvin Shuffield, Little Rock
For Speaker of the House—
Amail Chudy, North Little Rock
For Vice Speaker of the House—
Charles F. Wilkins, Jr., Russellville
For Councilors—
Bascom P. Raney, Jonesboro
Hugh R. Edwards, Searcy
L. J. Pat Bell, Helena
Wayne Lazenby, Dumas
George F. Wynne, Warren

J. B. Jameson, Jr., Camden
C. Lynn Harris, Hope
Robert F. McCrary, Hot Springs
William S. Orr, Jr., Little Rock
Henry V. Kirby, Harrison
A. S. Koenig, Fort Smith

For delegate to the AMA House of Delegates (term January 1, 1971, to December 31, 1972)—
C. C. Long, Ozark

For alternate delegate to the AMA House of Delegates (term January 1, 1971, to December 31, 1972)—
Joe Verser, Harrisburg

Speaker Chudy recognized William A. Snodgrass, Jr., of Pulaski County, who requested that his name be withdrawn as a nominee for the position of President-elect.

Upon the motion of Shuffield and Kemp, the House voted to accept by acclamation all nominees for positions except the fifth district councilor.

By secret ballot, the House elected George F. Wynne of Warren to the position of councilor for the fifth district.

Speaker Chudy called on the new President-elect of the Society, Stanley Applegate of Springdale. Dr. Applegate made the following comments in accepting the office:

"I solicit your support. I hope that all of the county medical societies and the councilor district societies will continue their support. The practice of medicine is getting to be more complicated all the time and the complications that the government present to us make it even worse, so I think that we are going to have to stand united or we are going to be hung individually. Thank you for your confidence. I am looking forward to helping our present president as much as I can in the coming year. Thank you."

Speaker Chudy called for the report of the Resolutions Committee. James C. Bethel, chairman of the committee, presented the following resolutions:

RESOLUTION OF APPRECIATION

WHEREAS, the 94th Annual Session of the Arkansas Medical Society, just completed in Hot Springs, has been an outstanding success; and

WHEREAS, the management of the Arlington Hotel has facilitated our efforts in every way in providing meeting rooms, projection equipment, and otherwise assisting in arrangements for our meeting; and

WHEREAS, the third councilor district—Drs. L. J. Pat Bell and Dwight W. Gray, the individual members thereof, and the Auxiliary—have been gracious hosts, and have contributed greatly to our enjoyment; and

WHEREAS, the management of the Hot Springs Country Club has been most gracious in making its golf course available for the golf tournament; and

WHEREAS, the guest speakers have added greatly to the worth of our meeting, and we have benefited from the lessons which they have shared with us; and

WHEREAS, the hours of thought devoted by Dr. Wright Hawkins and his Committee on Arrangements have been greatly rewarding, and have borne fruit in a program of outstanding worth; and

WHEREAS, study and other effort were given by our scientific exhibitors and an award furnished by the Eaton Laboratories resulted in exhibits that have been instructive, and were greatly enjoyed; and

WHEREAS, the commercial exhibits were of great benefit to our gathering and the courteous and careful attention of the attendants was quite helpful and the caricatures drawn by Mrs. John Kennedy with the compliments of Bristol Laboratories were greatly enjoyed by the members; and

WHEREAS, the members and wives of Ark-Pac were most gracious in furnishing the hospitality bar; and

WHEREAS, the Majestic Hotel provided outstanding entertainment and food for the luau held there; and

WHEREAS, the Woman's Auxiliary contributed greatly through their diligence, attendance and inspiration;

NOW, THEREFORE, BE IT RESOLVED, that the Arkansas Medical Society records its sincere appreciation and expresses its heartfelt thanks to our host city, and those heretofore mentioned, for the cordial welcome, the extension of unbounded hospitality, the expression of good will and kindly feelings shown each member of the Society, who has been privileged to attend this session. We shall ever hold in pleasant memory the hours spent as their guests during the last several days.

RESOLUTION OF APPRECIATION: NEWS MEDIA

WHEREAS, the 94th Annual Session of the Arkansas Medical Society, just completed in Hot Springs, has been an outstanding success; and

WHEREAS, the Hot Springs Sentinel-Record, the Arkansas Gazette, the Arkansas Democrat, the Little Rock television stations, and other news media, have made available to the Medical Society extended coverage of its meetings;

NOW, THEREFORE, BE IT RESOLVED, that the House of Delegates expresses its thanks for the Medical Society to the news media.

RESOLUTION OF APPRECIATION: MEDICAL ASSISTANTS

WHEREAS, the Arkansas State Medical Assistants Society has been most kind and generous in serving coffee and doughnuts to the members of the Society attending this 94th Annual Session; and

WHEREAS, the coffee bar has added much to the success of the meeting; and

WHEREAS, the medical assistants have demonstrated their support and dedication to the purposes of organized medicine;

NOW, THEREFORE, BE IT RESOLVED, that the House of Delegates of the Arkansas Medical Society expresses its thanks and appreciation to the Medical Assistants Society and to its representatives who have been so gracious to us during the last several days.

By standing vote, the House approved the resolutions.

Speaker Chudy called for reports of the reference committees. The chairman of Reference Committee Number One, Ross Maynard, presented the following report:

REPORT OF REFERENCE COMMITTEE NUMBER ONE

Ross Maynard, Chairman

Mr. Speaker and members of the House of Delegates:

Your reference committee gave careful consideration to the items referred to it and makes the following report.

Your reference committee reviewed the following annual reports:

1. Report of the Committee on Public (Rural) Health. Ben N. Saltzman and his committee are to be highly commended for their extensive work done in this field.

2. Report of the Sub-Committee on Liaison with the State Board of Health.

3. Report of the Sub-Committee on Physical Fitness and School Health.

4. Report of the Sub-Committee on Traffic Safety.

5. Report of the Committee on Medical Education.

6. Report of the Committee on Public Relations.

7. Report of the Committee on Medicine and Religion.

8. Report of the Arkansas State Advisory Committee to the Selective Service System.

9. Report of the Executive Vice President.

Mr. Speaker, your reference committee recommends that the reports above listed be accepted as written. So ordered.

10. Report of the Sub-Committee on Mental Health. We recommend the acceptance of the report as written with the exception of Item 5 of the report; we think further study and evaluation needs to be made before any recommendation for action could be made.

Mr. Speaker, the committee recommends acceptance of this report with the exclusion of Item 5. So ordered.

11. Report of the Sub-Committee on Immunization. There was much discussion presented by Vida Gordon of the University Medical Center and Roger Bost of the University Medical Center and others on the extensive use and favorable reports of Rubella Vaccine in certain areas and the lack of danger in the mass immunization of the age 1-6 child.

Mr. Speaker, your reference committee recommends that the report of this committee not be accepted as written and that it be referred back to the committee for indicated changes. So ordered.

12. Resolution on mass Rubella immunization from Pope-Yell County. Your committee reviewed this resolution and the problems associated with such a recommended program.

Mr. Speaker, your reference committee recommends that this resolution be adopted. So ordered.

13. Resolution of the Union County Medical Society on Medical Ethics. Your reference committee listened to the presentation of and a great deal of discussion on the many and varied fields of involvement of this one problem of medical ethics.

Mr. Speaker, it is your reference committee's

recommendation that this be referred to the House of Delegates for further discussion and action.

Jacob Ellis of the Union County Medical Society spoke on behalf of the resolution and there was considerable discussion by various members of the House. Upon the motion of Jacob Ellis and Ben Saltzman, the House adopted the resolution.

34. Resolution from Pulaski County Medical Society. Reference to 21-Man Committee membership rotation. Your committee feels that this should be added to the resolution:

"Be it also resolved that terms of committee service be limited to five years, that terms of service be staggered in time and that the staggering should also include all medical disciplines, including sub-specialties."

Mr. Speaker, your committee refers this to the House of Delegates for further action. Upon the motion of Purcell Smith and John Kirkley, the House voted to adopt the resolution as amended by the reference committee.

Mr. Speaker, this concludes the report of your Reference Committee Number One. I would like to take this opportunity to thank the other members of this reference committee and all those who participated in the discussion at the committee hearing.

Upon the motion of Ross Maynard and G. Thomas Jansen, the House voted approval of the report of Reference Committee Number One.

Speaker Chudy called for the report of Reference Committee Number Two, which was presented as follows:

REPORT OF REFERENCE COMMITTEE NUMBER TWO

Winston K. Shorey, Chairman

Mr. Speaker and members of the House of Delegates:

Reference Committee Number Two met at 3:30 P.M. on Sunday, April 26, 1970, immediately following the first session of the House of Delegates. Attendance at the meeting was adequate for a review of the issues assigned to this committee. Discussion ranged from none regarding certain items to, let us say, stimulating on others.

The following items proved to be completely non-controversial:

1. Report of the Sub-Committtee on Vocational Rehabilitation.

2. Report of the Committee on Hospitals.

3. Report of the Sub-Committee on State Health and Medical Resources for Civil Defense.

4. Report of the Sub-Committee on Liaison with the Auxiliary.

5. Report of the Advisory Committee to Medical Assistants.

6. Report of the Emergency Health Services Committee.

7. Report of the Council.

8. Report of the Budget Committee.

9. Summary of Actions of AMA House of Delegates.

The reference committee has no comments nor additional recommendations regarding these reports.

Mr. Speaker, I move approval of each of these nine reports. So ordered by Speaker.

Mr. Speaker, may I say that in reporting on other issues here, the reference committee did not have the value of the discussion here in this House of Delegates. Also, I might add that, in most instances, there was a feeling of sympathy for the philosophy expressed relative to these issues, more frequently as a matter of procedures that were at variance rather than a concept of philosophy.

Report of the Twenty-One Man Fee Committee. *Discussion occurred regarding the structure and functions of the Twenty-One Man Fee Committee and the Five-Man Sub-Committee consisting of the Chairman of the Twenty-One Man Fee Committee, together with the Executive Committee of the Council of the Arkansas Medical Society. Opinion was expressed from the floor that inasmuch as it is the Five-Man Sub-Committee that reviews the majority of questionable claims for Blue Cross-Blue Shield, true peer review in many instances does not occur when these claims are those of specialists. Individuals involved with review of claims who were present at the reference committee meeting explained the review procedures. It was pointed out that questionable claims of specialists receive consultative opinion from physicians in the respective specialty, including the appropriate member of the Twenty-One Man Fee Committee, and others. Review of claims by the Twenty-One Man Fee Committee, the Five-Man Sub-Committee, and by consultants is accomplished without the names of physicians or patients being revealed to the reviewers.*

Your reference committee sensed that there is

not complete understanding among the membership of the Society regarding the review procedures utilized nor of the efforts that have been made to obtain objective and impartial review. Issues presented during subsequent discussion of a proposed resolution leads the reference committee to believe that the Twenty-One Man Fee Committee can increase its service to the membership through reviewing complaints physicians may have regarding the administration of Medicare, through providing for evaluation of such complaints by peers of the complaining physician, and through negotiating with appropriate authorities to correct errors in program administration.

Mr. Speaker, I move approval of the report of the Twenty-One Man Fee Committee and of the following recommendations made by the reference committee:

1. The Council of the Society consider means to provide increased communication to the membership regarding review procedures.

2. The Council of the Society review existing procedures to determine if appropriate peer review is provided for specialists and to correct deficiencies if they exist.

3. The Council of the Society consider extension of the scope of responsibilities of the Twenty-One Man Fee Committee to include, upon petition by a physician, review of disputed methods of therapy and to negotiate with a third party provider for correction of directives that are found to compromise a physician in the treatment of his patient.

This portion of the report was approved as presented.

Resolution on Medicare Guidelines. *Your reference committee considered at length "Resolution on Medicare Guidelines" submitted by the Union County Medical Society. Discussion of this resolution from the floor can be described as having been intense and reflected frustrations encountered in providing medical services under Medicare. Particular exception was taken to the requirement for itemization of medications administered by injection and for which special charges are made. The contention was advanced that such itemization results in the release of privileged information regarding a patient. It was argued that a patient should not be required to sign a form permitting the release of such information in order for payments for services to be made through Medicare. The contention was also made that control of any abuses of the Medicare Program should be handled through established procedures such as action by local medical society grievance committees rather than through guidelines established by the Department of Health, Education and Welfare.*

Your reference committee considered the issues presented by the Union County Medical Society in this resolution with a great deal of sympathy, recognizing that certain prerogatives which in the past have been entirely those of the physician now are subject to scrutiny by representatives of and consultants for third party payers. In the present instance, the third party is Arkansas Blue Cross-Blue Shield acting as intermediary for Medicare, and Blue Cross-Blue Shield must conduct its activities in accordance with guidelines developed by the Social Security Administration of the Department of Health, Education and Welfare. The Twenty-One Man Fee Committee represents the Arkansas Medical Society and serves to arbitrate disputed claims. The Executive Committee of the Council has served to negotiate problems of policy with the intermediary. Your reference committee is of the opinion that the interests of the membership of the Arkansas Medical Society are best served through continuing negotiation between appropriate representatives of the Society and those responsible for administration of Medicare. The issues presented in this resolution are cogent and pertinent to such negotiations, and those representing the Medical Society are aware of the problems presented. At the same time, the wording and atmosphere created by this resolution are such that your reference committee is of the opinion that its adoption by this House of Delegates would not be in the best interest of the membership of the Arkansas Medical Society. Rather, your reference committee supports the position taken by the Council of the Society, which upon review of the resolution, reaffirmed present Medical Society policy of cooperating with the fiscal administrators and government agencies to make these programs work with the least interference with traditional aims and methods of the private practice of medicine.

Mr. Speaker, I move that the House of Delegates go on record as supporting the position of the Council of the Arkansas Medical Society as stated.

Jacob Ellis of Union County moved that this portion of the Reference Committee Report be

tabled. Second was by Kenneth Duzan of Union County. The motion was withdrawn after clarification of the question.

By voice vote, the House voted to sustain the reference committee in its recommendation.

Request for Action from Union County Medical Society. *Your Reference Committee considered at length a proposal from the Union County Medical Society entitled "Request for Action." This was concisely stated and of such significance to the Arkansas Medical Society that we believe it should be read at this time, and with your permission, Mr. Speaker, I would like to present it verbatim to this House of Delegates.*

"It is understood by the members of the Union County Medical Society that the Arkansas Medical Society, by its constitution and by tradition, is limited in its jurisdiction over its members. As we understand it, the purpose of the Arkansas Medical Society is to promote and organize only scientific, educational and social activities. Therefore, we believe that the Arkansas Medical Society should not become involved in questions concerning fees charged to patients by its members. We believe that the Arkansas Medical Society should have no voice in the formation of fee schedules, enforcement of fee schedules, etc.

"We, therefore, demand that the Arkansas Medical Society dissolve all present committees, composed of members of the Society, dealing with fees and fee schedules and appoint no such committees in the future and stop responsibilities of making contracts for members of the Arkansas Medical Society with third parties such as insurance companies, government agencies, etc.

"The delegation from Union County offers this as a motion before this body and, if passed by this House, they expect that these instructions, as so listed above, will be implemented by immediate action by the officers of the Arkansas Medical Society."

Your reference committee considers this motion as a request for action that would put an end to activities by committees of the Society that have provided the majority of its membership with the best possible approach to the distasteful situation of government subsidized medical services. Through hard work and dedication, the committees of the Society have established working relationships with Arkansas Blue Cross-Blue Shield and other provider agencies which make it possible to obtain for the membership of the Society benefits and arrangements which would be impossible for physicians to obtain on an individual basis. Furthermore, the various agencies with whom committees have negotiated have gained a much better understanding of the problem of physicians as a result of these negotiations.

The argument that such negotiations do not fall within the purview of the Arkansas Medical Society on a constitutional basis was not pursued by the reference committee through any attempt to interpret the written constitution. At the same time, it seems apparent to the reference committee that the Arkansas Medical Society has concerned itself deeply in the past with medical economics, and there has been no objection until this time regarding such involvement. The constitution of the Arkansas Medical Society depends upon the will of this House of Delegates, and it is possible that changes should be made to provide greater conformity with activities.

Mr. Speaker, the motion offered by the Union County Medical Society is presented to this House of Delegates with a recommendation by the reference committee that it be defeated. Upon second by John Trieschmann, the House so voted.

Mr. Speaker, I move approval of the entire report of Reference Committee Number Two. So ordered.

Speaker Chudy called for the report of Reference Committee Number Three. The report was presented as follows:

REPORT OF REFERENCE COMMITTEE NUMBER THREE

William S. Orr, Jr., Chairman

Mr. Speaker and members of the House of Delegates:

Your reference committee gave careful consideration to the items referred to it and makes the following report.

Report of the Committee on Insurance. Your reference committee recommends approval of this report. There was general discussion by the participants. For the information of this particular committee, St. Paul Insurance Company does not provide full liability coverage in all areas and further study and action in these areas would enhance increased participation. This is a recommendation to the Insurance Committee that they study this matter and take it up with the St. Paul Insurance Company.

Mr. Speaker, I recommend adoption of this report. So ordered.

Report of the Sub-Committee on Liaison with the Nursing Profession. Your reference committee recommends approval of this report and commends the chairman and members of this committee for their activities. It was further suggested that additional meetings with the nursing profession be carried out.

Mr. Speaker, I recommend adoption of this report. So ordered.

Report of the Constitutional Revisions Committee. Your reference committee recommends approval of this report and adoption of changes read at the first meeting of the House of Delegates on April 25, 1970.

Mr. Speaker, I recommend adoption of this report. So ordered.

Report of the Sub-Committee on Liaison with the Student AMA. Your reference committee recommended approval of this report with the suggestion that the Student American Medical Association membership invite more participation by members of the Arkansas Medical Society in their programs.

Mr. Speaker, I recommend adoption of this report. So ordered.

Report of the AMA delegates. Your reference committee recommends approval of this report and commends our delegates to AMA, C. C. Long and Jack Kennedy, for their comprehensive report and the diligence of their efforts.

Mr. Speaker, I recommend adoption of this report. So ordered.

Report of the Professional Relations Committees for the First, Second, Seventh, Eighth, and Ninth Councilor Districts. Your reference committee recommended acceptance of these reports as written.

Mr. Speaker, I recommend adoption of these reports. So ordered.

Report of Senior Medical Day Committee. Your reference committee recommends approval of this report and commends the membership of this committee for their work and for information. The next Senior Medical Day program is scheduled for Pleasant Valley Country Club, Little Rock, Arkansas, on May 5, 1970.

Mr. Speaker, I recommend adoption of this report. So ordered.

Report from the School of Medicine. Your reference committee recommends approval of this report. This report is interesting and comprehensive and should be read by the membership of the Society. Your reference committee further commends Winston K. Shorey for this presentation.

Mr. Speaker, I recommend adoption of this report. So ordered.

Report from the State Health Department. Your reference committee recommends approval of this report and commends John T. Herron for the completeness of this report and the membership is encouraged to study the report on the various aspects of the work of the State Health Department.

Mr. Speaker, I recommend adoption of this report. So ordered.

Resolution from the Greene-Clay County Medical Society. This resolution was received for information only.

Mr. Speaker, I recommend adoption of this portion of the reference committee report. So ordered.

Report of the Committee on Correlation of Government Plans. Your reference committee recommends approval of this report.

Mr. Speaker, I recommend adoption of this report. So ordered.

Resolution on Safety Caps for Medications. Your reference committee recommends adoption of this resolution.

Mr. Speaker, I move adoption of this resolution. So ordered.

Report of Joe Verser, Licensure of Osteopaths. Your reference committee recommends acceptance of the proposal of Joe Verser. There was a lengthy and lively discussion of this item of business and your reference committee feels the general consensus of opinion was to accept and work for a positive approach to this matter and we should endorse this proposal.

Mr. Speaker, I recommend adoption of this report. So ordered.

Mr. Speaker, this concludes the report of Reference Committee Number Three. I wish to thank the many participants who appeared before the committee and the fellow members of this committee.

Mr. Speaker, I move adoption of this report as a whole. So ordered.

The Supplemental Report of the Council covering meetings held during the convention was presented by Chairman John P. Wood:

REPORT OF THE COUNCIL

The Council met on Sunday, April 26th, and:

1. *Appointed a resolutions committee composed of James Bethel and L. J. Pat Bell.*
2. *Approved the following list of life memberships: D. W. Goldstein, Fort Smith; P. E. Thomas, Little Rock.*
3. *Approved the following affiliate memberships:*

For retirement:

James L. Jackson	*W. F. Adams*
V. N. Kennedy	*Thomas P. Foltz*
Robert R. Kirkpatrick	*R. W. Pickett*
Joseph H. Downs	*H. K. Carrington*
Caldeen D. Gunter	*Paul H. Jeffrey*
James D. Kinley	*William L. McNamara*
R. M. Blakely	*Martha M. Brown*
Alan G. Cazort	*Hoyt L. Choate*
Ellis P. Cope	*Eva F. Dodge*
Glen M. Holmes	*Ruth H. Junkin*
Harold H. Miller	*James M. Nisbett*
N. W. Riegler, Sr.	*Frances C. Rothert*
Charles R. Wallis	*A. M. Washburn*
Clarence F. Watson	*Charles R. Walton*
H. L. Boyer	*Charles M. Brizzolara*
Joseph P. DeLaney	*Lawrence H. Siegel*
William K. Bell	

For disability:

Raymond E. Buirge	*Horace H. Holt*
H. E. McEntire	*Dewey Sloan*
Calvin A. Churchill	*Daniel H. Autry*
Hoyt R. Allen	*Bryce Cummins*
S. T. W. Cull	*H. Clay Chenault (deceased)*
Hunter C. Sims, Sr.	
Benjamin F. Banister	

For financial hardship:

M. H. Scott

For residency training:

Rodger P. Lewis	*Jimmie J. Magie*
Solon McGaughey	*Donald I. Purcell*
Otis E. Cutler	*William L. Garner*
Orval E. Riggs	*William A. Woodcock*
B. J. Jordan	

For military service:

James O. Turbeville	*Alex S. Y. Go*
John L. Garrett	

4. *Approved the nomination of T. E. Townsend of Pine Bluff for a position on the Board of Trustees of the Arkansas Blue Cross-Blue Shield.*
5. *Approved the nomination of Dr. Paul Hughes of Texarkana and Dr. John D. Olson of Fort Smith to succeed themselves on the Arkansas State Arbitration Commission.*
6. *Elected Dr. Robert Watson to succeed himself on the Board of Trustees of the Medical Education Foundation for Arkansas.*
7. *Elected the following members of the Society and the Auxiliary to serve on the Ark-Pac Board of Trustees for the next twelve months:*

James Armstrong, Ashdown
Calvin Bradford, Fort Smith
Ross Fowler, Harrison
Kenneth R. Duzan, El Dorado
Asa Crow, Paragould
F. M. Henderson, Pine Bluff
William S. Orr, Jr., Little Rock
T. E. Townsend, Pine Bluff
Paul Wallick, Monticello
Henry A. Crane, Jr., Pine Bluff
Mrs. W. Payton Kolb, Little Rock
Mrs. C. Lynn Harris, Hope

The Council met on Monday and conducted the following business:

1. *Received a letter from Blue Cross-Blue Shield advising that organization would bear the expense of defending members of the 21-Man Committee against any lawsuits resulting from their actions as committee members.*
2. *Heard a report that the Regional Medical Program had been cut by 80% and that it has been decided to limit the program to the fourth councilor district until budgetary problems are overcome.*
3. *Heard Duane Jones of the Booneville Sanatorium propose the use of the Sanatorium for treatment of chronic respiratory diseases.*

The Council met on Tuesday and:

1. *Heard a written statement of Colonel Scott of the Arkansas State Police urging continued support of the medical profession and offering an explanation of the concerned citizens cards. The statement was referred to the Traffic Safety Committee and the headquarters office was directed to circulate the statement to the members of the Arkansas Medical Society. It was also directed that Colonel Scott be advised of the above actions.*
2. *After discussion, the Council voted to approve the handling of the Medical Education Foundation by Robert Watson and the Board of Trustees of that organization. It was directed that a letter be written to Dr. Watson commending him.*

The Council met on Wednesday and:

1. *Approved the purchase of a film on marijuana for use in connection with the Society's drug abuse education program.*
2. *Directed the Executive Committee to appoint an alternate for Lee Parker on the Regional Medical Program advisory board.*
3. *Voted to recommend Joseph D. Calhoun of Little Rock for a position on the Joint Commission on Accreditation of Hospitals.*
4. *Decided to appoint a committee to study ways to improve attendance at scientific meetings.*

Upon the motion of Wood and C. C. Long, the report of the Council was approved as read.

The House gave a standing vote of thanks to, and confidence in, the Woman's Auxiliary to the Arkansas Medical Society for their action in voting to cooperate with the Governor's Task Force to combat drug abuse.

Upon the motion of Ben Stalzman and Eldon Fairley, the House approved the following nominations for submission to the Governor:

For Fifth Congressional District position on the Arkansas State Medical Board—
William A. Snodgrass, Jr., Little Rock

For Second Congressional District position on the State Board of Health—
Charles Taylor, Batesville
William M. Wells, Heber Springs
Jack R. Gardner, Searcy

For Fourth Congressional District position on the State Board of Health—
Warren S. Riley, El Dorado
James C. Burroughs, Texarkana
Jim McKenzie, Hope

John Trieschmann of Garland County extended an invitation to the Society to return to Hot Springs for the Society's Winter Meeting and for the Annual Meeting in 1971.

A delegate to the American Medical Association, C. C. Long, requested and was granted permission to present to the House a resolution which will be submitted to the House of Delegates of the American Medical Association in Chicago in June by the AMA Council on Rural Health. The resolution is relative to allowing young physicians to serve in rural areas or ghetto areas of need in lieu of service obligations. They would receive the same pay, which would probably be worked out under the Public Health Service Department, similar to that of physicians serving on Indian Reservations. Dr. Long requested an expression of opinion from the House to guide him and Dr. Smith in their vote at the AMA House of Delegates. Upon the motion of James L. Smith and Dwight W. Gray, the House voted to direct the delegates to AMA to oppose the resolution.

The House adjourned at 12:10 P.M.

REORGANIZATIONAL MEETING OF THE COUNCIL

Immediately following adjournment of the House of Delegates, the Council held a brief meeting to reorganize. John P. Wood served as temporary chairman. C. C. Long of Ozark was elected chairman of the Council and Alfred Kahn, Jr., of Little Rock was elected editor of the Journal.

The Council voted to commend John P. Wood for his excellent year of leadership as chairman of the Council.

Stanley Applegate nominated Morriss Henry of Fayetteville for the position of ninth district councilor left vacant by his election to the position of President-elect. Dr. Henry was unanimously elected to the position.

CONVENTION REGISTRATION

Physicians	445
Medical Students	4
Medical Assistants, Nurses, Technicians	30
Exhibits:	
Technical	125
Scientific	18
Auxiliary	14
Other Guests	25
	661

OFFICERS OF THE ARKANSAS MEDICAL SOCIETY — 1970-1971

President	Jack W. Kennedy, 1008 Pine, Arkadelphia 71923
President-elect	Stanley Applegate, 220 Meadow Avenue, Springdale 72764
First Vice President	Wright Hawkins, 100 South 14th, Fort Smith 72901
Second Vice President	Porter Rodgers, Jr., 607 Woodruff, Searcy 72143
Third Vice President	D. L. Owens, 113 East Rush, Harrison 72601
Secretary	Elvin Shuffield, 1000 Wolfe, Little Rock 72202

Secretary Emeritus	W. R. Brooksher, Box 3096, Station A, Fort Smith 72901
Treasurer	Ben N. Saltzman, 126 West Sixth, Mountain Home 72653
Speaker, House of Delegates	Amail Chudy, 1801 Maple, North Little Rock 72114
Vice Speaker of House	Charles Wilkins, Jr., 3005 W. Main Place, Russellville 72801
Journal Editor	Alfred Kahn, Jr., 1300 West Sixth, Little Rock 72201
Delegates to AMA	C. C. Long, 110 West Commercial, Ozark 72949
	Purcell Smith, 4001 West Capitol, Little Rock 72205
Alternates	Joe Verser, P. O. Box 106, Harrisburg 72432
	T. E. Townsend, 1310 Cherry, Pine Bluff 71601
Executive Vice President	Mr. Paul C. Schaefer, P. O. Box 1208, Fort Smith 72901

EXECUTIVE COMMITTEE OF THE COUNCIL

Chairman of the Council	C. C. Long, 110 West Commercial, Ozark 72949
President	Jack W. Kennedy, 1008 Pine, Arkadelphia 71923
President-elect	Stanley Applegate, 220 Meadow Avenue, Springdale 72764
Secretary	Elvin Shuffield, 1000 Wolfe, Little Rock 72202

COUNCILORS

District	Councilor Term Expires '71	Councilor Term Expires '72	Counties in District
1.	Eldon Fairley P. O. Box 71 Osceola 72370	Bascom P. Raney 403 East Matthews Jonesboro 72401	Clay, Craighead, Crittenden, Fulton, Greene, Lawrence, Mississippi, Poinsett, Randolph, and Sharp
2.	Paul Gray P. O. Box 31 Batesville 72501	Hugh R. Edwards 607 Woodruff Searcy 72143	Cleburne, Conway, Faulkner, Independence, Izard, Jackson, Stone, and White
3.	Dwight W. Gray 110 W. Chestnut Marianna 72360	L. J. P. Bell 626 Poplar Helena 72342	Arkansas, Cross, Lee, Lonoke, Monroe, Phillips, Prairie, St. Francis, and Woodruff
4.	Raymond Irwin 1421 Cherry Pine Bluff 71601	Wayne Lazenby 145 W. Waterman Dumas 71639	Ashley, Chicot, Desha, Drew, Jefferson, and Lincoln
5.	Kenneth R. Duzan 443 West Oak El Dorado 71730	George F. Wynne 113 West Cypress Warren 71671	Bradley, Calhoun, Cleveland, Columbia, Dallas, Ouachita, and Union
6.	Karlton H. Kemp 408 Hazel Texarkana 75501	C. Lynn Harris 820 South Main Hope 71801	Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Pike, Polk, and Sevier
7.	James C. Bethel 221 East Sevier Benton 72015	Robert F. McCrary Meyer Building Hot Springs 71901	Clark, Garland, Grant, Hot Spring, Montgomery, and Saline
8.	W. Payton Kolb 1120 Marshall Little Rock 72202	William S. Orr 500 S. University Little Rock 72205	Pulaski
9.	Morriss Henry 204 S. East St. Fayetteville 72701	Henry V. Kirby 216 North Walnut Harrison 72601	Baxter, Benton, Boone, Carroll, Madison, Marion, Newton, Searcy, Van Buren, and Washington
10.	C. C. Long 110 W. Commercial Ozark 72949	A. S. Koenig 922 Lexington Fort Smith 72901	Crawford, Franklin, Johnson, Logan, Perry, Pope, Scott, Sebastian, and Yell

1970 OFFICERS—COUNTY MEDICAL SOCIETIES—

Arkansas ..... Pres.—E. A. McCracken, 509 South Main, Stuttgart 72160
Secy.—Paul H. Millar, Jr., Route 1, Box 21D, Stuttgart 72160

Ashley ..... Pres.—W. A. Regnier, P. O. Box 678, Crossett 71635
Secy.—Frederick N. Burt, 113 Pine, Crossett 71635

Baxter ..... Pres.—Carl B. Arnold, Salem Clinic, Salem 72576
Secy.—Ben N. Saltzman, 126 West 6th, Mountain Home 72653

Benton ..... Pres.—Billy J. Puckett, 304 South Maxwell, Siloam Springs 72761
Secy.—John I. Moose, 304 South Maxwell, Siloam Springs 72761

Boone ..... Pres.—J. David Martin, Box 1095, Harrison 72601
Secy.—William H. Breit, 651 North Spring, Harrison 72601

Bradley ..... Pres.—George F. Wynne, 113 West Cypress, Warren 71671
Secy.—William C. Whaley, Jr., 203 East Church, Warren 71671

Chicot ..... Pres.—Major E. Smith, 134 East Peddicord, Dermott 71638
Secy.—W. J. Weaver, P. O. Box "Q," Eudora 71640

Clark ..... Pres.—J. W. Reid, 618 Caddo, Arkadelphia 71923
Secy.—R. H. Nunnally, 107 North Third, Gurdon 71743

Cleburne ..... Pres.—Michael E. Barnett, 4th and Spring, Heber Springs 72543
Secy.—D. H. McClanahan, 600 West Main, Heber Springs 72543

Columbia ..... Pres.—Scott McMahen, P. O. Box 647, Magnolia 71753
Secy.—Charles H. Weber, 110 West North, Magnolia 71753

Conway ..... Pres.—H. B. White, 1109 East Broadway, Morrilton 72110
Secy.—William H. Siddon, P. O. Box 587, Morrilton 72110

Craighead-Poinsett ..... Pres.—Henry W. Keisker, Jr., 804 Jeter Drive, Jonesboro 72401
Secy.—Glen F. Baker, 411 East Matthews, Jonesboro 72401

Crawford ..... Pres.—F. E. Shearer, Route 2, Alma 72921
Secy.—Jack N. Thicksten, 164 Fayetteville, Alma 72921

Crittenden ..... Pres.—H. G. Lanford, 308 S. Rhodes, West Memphis 72301
Secy.—Keith B. Kennedy, 316 Tyler, West Memphis 72301

Cross ..... Pres.—Willard G. Burks, 303 East Union, Wynne 72396
Secy.—Vance J. Crain, 303 East Union, Wynne 72396

Dallas ..... Pres.—John H. Delamore, 1100 West 3rd, Fordyce 71742
Secy.—H. H. Atkinson, 300 Cadiz, Fordyce 71742

Desha ..... Pres.—O. G. Blackwell, 145 West Waterman, Dumas 71639
Secy.—Howard R. Harris, 207 South Elm, Dumas 71639

Drew ..... Pres.—John P. Price, 216 South Main, Monticello 71655
Secy.—Van C. Binns, 201 East Trotter, Monticello 71655

Faulkner ..... Pres.—Robert B. Benafield, 919 Locust, Conway 72032
Secy.—Bob G. Banister, 1300 North Parkway, Conway 72032

Franklin ..... Pres.—C. C. Long, 110 West Commercial, Ozark 72949
Secy.—David L. Gibbons, Gibbons Clinic, Ozark 72949

Garland	Pres.—Stuart B. McConkie, 715 West Grand, Hot Springs 71901 Secy.—Louis R. McFarland, 211 Hobson, Hot Springs 71901
Grant	Pres.—Curtis B. Clark, 200 South Rose, Sheridan 72150 Secy.—Clyde D. Paulk, 200 South Rose, Sheridan 72150
Greene-Clay	Pres.—Samuel D. Watson, 7th & Kingshighway, Paragould 72450 Secy.—Leonus L. Shedd, 901 West Kingshighway, Paragould 72450
Hempstead	Pres.—James G. Martindale, 116 South Main, Hope 71801 Secy.—Jack L. Royal, P. O. Box 97, Hope 71801
Hot Spring	Pres.—John D. Wise, 1219 South Main, Malvern 72104 Secy.—Robert H. White, 1004 South Dyer, Malvern 72104
Howard-Pike	Pres.—M. H. Wilmoth, 14th and Leslie, Nashville 71852 Secy.—M. H. Wilmoth, 14th and Leslie, Nashville 71852
Independence	Pres.—James M. Stalker, P. O. Box 1506, Batesville 72501 Secy.—Chaney W. Taylor, North Arkansas Clinic, Batesville 72501
Jackson	Pres.—M. H. Harris, 1205 McLain, Newport 72112 Secy.—John D. Ashley, 2nd and Laurel, Newport 72112
Jefferson	Pres.—Henry A. Crane, Jr., 1107 Cherry, Pine Bluff 71601 Secy.—S. H. Hoover, 1421 Cherry Street, Pine Bluff 71601
Johnson	Pres.—Clyde H. Underwood, 201 Rogers Street, Clarksville 72830 Secy.—R. H. Manley, 307 West Main, Clarksville 72830
Lafayette	Pres.—R. H. Harrison, Lewisville 71829 Secy.—Willie J. Lee, P. O. Box 276, Stamps 71860
Lawrence	Pres.—J. B. Elders, 321 Southwest Third, Walnut Ridge 72476 Secy.—J. B. Elders, 321 Southwest Third, Walnut Ridge 72476
Lee	Pres.—E. C. Fields, Route 3, Box 22A, Marianna 72360 Secy.—Floyd S. Dozier, 29 North Poplar, Marianna 72360
Lincoln	Pres.—James Freeland, Box 608, Star City 71667 Secy.—Richard C. Petty, Box 638, Star City 71667
Little River	Pres.—N. W. Peacock, Jr., P. O. Box 667, Ashdown 71822 Secy.—James D. Armstrong, P. O. Box 697, Ashdown 71822
Logan	Pres.—Charles McD. Smith, 710 North Express, Paris 72855 Secy.—James T. Smith, 710 North Express, Paris 72855
Lonoke	Pres.—Thomas O. Wood, Jr., England Hospital, England 72046 Secy.—B. E. Holmes, 305 West Front, Lonoke 72086
Miller	Pres.—A. G. Goesl, 119 East 6th, Texarkana 75501 Secy.—R. H. Chappell, P. O. Box 1288, Texarkana, Texas 75501 Exec. Secy.—Mrs. Marilyn Pryor, P. O. Box 1843, Texarkana 75501
Mississippi	Pres.—Charles E. Campbell, Jr., 519 N. 6th, Blytheville 72315 Secy.—Eldon Fairley, P. O. Box 71, Osceola 72370
Monroe	Pres.—N. C. David, Jr., 108 W. Ash, Brinkley 72021 Secy.—M. L. Dalton, 510 Main, Brinkley 72021
Nevada	Pres.—H. Blake Crow, 327 East 2nd, Prescott 71857 Secy.—H. Blake Crow, 327 East 2nd, Prescott 71857

OUACHITA	Pres.—Charles H. Fohn, 110 Harrison Avenue, S.W., Camden 71701 Secy.—Lowell V. Ozment, 530 Jefferson Street, S.W., Camden 71701
PHILLIPS	Pres.—James E. Wise, Jr., P. O. Box 546, Marvell 72366 Secy.—William W. Biggs, Helena Hospital, Helena 72342
POLK	Pres.—David P. Hefner, 518 Janssen, Mena 71953 Secy.—Henry N. Rogers, 600 West 7th, Mena 71953
POPE-YELL	Pres.—Joseph A. Gardner, 3005 West Main Place, Russellville 72801 Secy.—W. E. King, Jr., 3005 W. Main Place, Russellville 72801
PULASKI	Pres.—Charles R. Henry, 500 S. University, Little Rock 72205 Secy.—James R. Weber, 1110 West Main, Jacksonville 72076 Exec. Secy.—Mr. Paul Harris, Univ. Tower Bldg., Little Rock 72204
RANDOLPH	Pres.—Norman K. Smith, 108 Van Bibber, Pocahontas 72455 Secy.—Hal S. Barre, 213 W. Broadway, Pocahontas 72455
SALINE	Pres.—Robert E. Jones, 223 S. Market, Benton 72015 Secy.—James C. Bethel, 221 E. Sevier, Benton 72015
SCOTT	Pres.—Harold B. Wright, P. O. Box 249, Waldron 72958 Secy.—James A. Jenkins, P. O. Box 190, Waldron 72958
SEARCY	Pres.—John H. Williams, P. O. Box 177, Marshall 72650 Secy.—John A. Hall, 320 East Main, Clinton 72031
SEBASTIAN	Pres.—William B. Stanton, 300 N. Greenwood, Fort Smith 72901 Secy.—Paul L. Rogers, P. O. Box 3096, Station A, Fort Smith 72901 Asst. Secy.—Mrs. Jackie Boyd, c/o Sparks Hosp., Fort Smith 72901
SEVIER	Pres.—J. Frank Daniel, DeQueen Clinic, Hwy. 70 West, DeQueen 71832 Secy.—Wayne G. Pullen, DeQueen Clinic, Hwy. 70 West, DeQueen 71832 Exec. Secy.—Mr. Walter E. Cox, DeQueen Clinic, Hwy. 70 West, DeQueen 71832
ST. FRANCIS	Pres.— Secy.—E. Morgan Collins, P. O. Box 989, Forrest City 72335
UNION	Pres.—Berry L. Moore, Jr., 615 West Grove, El Dorado 71730 Secy.—Dorothy C. Sample, 427 West Oak, El Dorado 71730
WASHINGTON	Pres.—Jack A. Wood, 1749 N. College, Fayetteville 72701 Secy.—Robert H. McCollum, 102 W. Dickson, Fayetteville 72701
WHITE	Pres.—Thomas A. Formby, 910 East Race, Searcy 72143 Secy.—Hugh R. Edwards, 607 Woodruff, Searcy 72143
WOODRUFF	Pres.—Basil E. Hendrixson, 306 East Third, McCrory 72101 Secy.—Fay B. Millwee, P. O. Box 248, McCrory 72101

COMMITTEES — ARKANSAS MEDICAL SOCIETY — 1970-71

	Term Expires
COMMITTEE ON CANCER CONTROL	
Robert L. McDonald, P. O. Box 7863, Pine Bluff 71601	1971
Doyne Dodd, 4301 West Markham, Little Rock 72205	1971
Jean C. Gladden, 651 North Spring, Harrison 72601	1972
Glenn P. Schoettle, 308 South Rhodes, West Memphis 72301	1972
Frank G. Kumpuris, 415 North University, Little Rock 72205—*CHAIRMAN*	1973

	Term Expires
Charles R. Henry, 500 South University, Little Rock 72205	1973
COMMITTEE ON MEDICAL LEGISLATION	
Ross E. Maynard, 303 National Building, Pine Bluff 71601	1971
Friedman Sisco, 101 South Shilo, Springdale 72764	1971
Henry A. Crane, Jr., 1107 Cherry, Pine Bluff 71601	1971
Elvin Shuffield, 1000 Wolfe, Little Rock 72202—*CHAIRMAN*	1972
Joe Verser, P. O. Box 106, Harrisburg 72432	1972
William A. Snodgrass, Jr., Donaghey Building, Little Rock 72201	1972
W. Payton Kolb, 1120 Marshall, Little Rock 72202	1973
Martin Eisele, 101 Whittington, Hot Springs 71901	1973
Robert Watson, Donaghey Building, Little Rock 72201	1973
SUB-COMMITTEE ON NATIONAL LEGISLATION	
George F. Wynne, 113 West Cypress, Warren 71671	1971
Dale Alford, 5700 West Markham, Little Rock 72205—*CHAIRMAN*	1971
Kenneth R. Duzan, 443 West Oak, El Dorado 71730	1972
Kemal Kutait, 1120 Lexington, Fort Smith 72901	1972
Haymond Harris, 1205 McLain, Newport 72112	1973
Vernon E. Sammons, Jr., 236 Central, Hot Springs 71901	1973
COMMITTEE ON PUBLIC HEALTH	
John P. Bethel, Jr., Route 1, Box 21-D, Stuttgart 72160	1971
Wayne Lazenby, 145 West Waterman, Dumas 71639	1971
C. A. Archer, Jr., 919 Locust, Conway 72032	1971
Vestal B. Smith, P. O. Box 614, Marked Tree 72365	1972
Omer E. Bradsher, 901 West Kingshighway, Paragould 72450	1972
Ben N. Saltzman, 126 West Sixth, Mountain Home 72653—*CHAIRMAN*	1973
Bryant S. Swindoll, 4815 West Markham, Little Rock 72205	1973
SUB-COMMITTEE ON LIAISON WITH THE STATE BOARD OF HEALTH	
Jack T. Dobson, 110 North Clinton, Fordyce 71742	1971
M. R. Springer, Jr., 236 Central, Hot Springs 71901	1971
Charles G. Swingle, 105 Nathan, Marked Tree 72365	1971
Hugh R. Edwards, 607 Woodruff, Searcy 72143	1972
Karlton H. Kemp, 408 Hazel, Texarkana 75501—*CHAIRMAN*	1973
SUB-COMMITTEE ON MATERNAL AND CHILD WELFARE	
John W. Trieschmann, 236 Woodbine, Hot Springs 71901—*CHAIRMAN*	1971
Robert L. Sherman, P. O. Box 3007, Fort Smith 72901	1971
James W. Burnett, 414 Hazel, Texarkana 75501	1972
Dale Briggs, 1210 Look, Little Rock 72204	1973
SUB-COMMITTEE ON TUBERCULOSIS	
C. Clyde Tracy, 1121 Cherry, Pine Bluff 71601	1971
Joseph G. Shelton, Jr., P. O. Box 697, Ashdown 71822	1971
Harley C. Darnall, 211-D North Greenwood, Fort Smith 72901	1972
Kenneth A. Siler, 651 North Spring, Harrison 72601	1972
L. J. Pat Bell, 626 Poplar, Helena 72342	1973
Robert M. Franklin, 3005 West Main Place, Russellville 72801—*CHAIRMAN*	1973
COMMITTEE ON AGING	
John F. Guenthner, 126 West Sixth, Mountain Home 72653	1971
R. A. Etherington, 41 Kingshighway, Eureka Springs 72632	1971
Joseph A. Norton, 8570 Cantrell Road, Little Rock 72207	1972
Bill D. Stewart, 415 North University, Little Rock 72205—*CHAIRMAN*	1973
Gordon P. Oates, 1612 Maryland, Little Rock 72202	1973
Thomas E. Burrow, 236 Central, Hot Springs 71901	1973
SUB-COMMITTEE ON PHYSICAL FITNESS AND SCHOOL HEALTH	
J. A. Harrel, Jr., Route 5, Box 615A, Little Rock 72207	1971
Robert H. Langston, 520 North Spring, Harrison 72601—*CHAIRMAN*	1971
James T. Blackmon, 1008 Pine, Arkadelphia 71923	1972
Francis M. Henderson, 1310 Cherry, Pine Bluff 71601	1973
Betty A. Lowe, 401 East 5th, Texarkana 75501	1973
Coy C. Kaylor, 1673 North College, Fayetteville 72701	1973
SUB-COMMITTEE ON INDUSTRIAL HEALTH	
William B. Harrell, Jr., 317 State Line, Texarkana 75501	1971
James C. Bethel, 221 East Sevier, Benton 72015	1971
Gerald K. Patton, 100 North 16th, Fort Smith 72901	1972
William L. Steele, 5520 West Markham, Little Rock 72205	1972
Roy I. Millard, 3005 West Main Place, Russellville 72801—*CHAIRMAN*	1973
H. Blake Crow, 327 East 2nd, Prescott 71857	1973
COMMITTEE ON MENTAL HEALTH	
William C. Whaley, Jr., 203 East Church, Warren 71671	1971
James D. Rankin, Jr., 351 West Parker, Hamburg 71646	1971
William G. Reese, 4301 West Markham, Little Rock 72205	1972
W. Payton Kolb, 1120 Marshall, Little Rock 72202	1972
Robert H. Whitehead, Jr., Donaghey Building, Little Rock 72201	1972
William O. Young, Donaghey Building, Little Rock 72201—*CHAIRMAN*	1973

	Term Expires
H. D. Luck, 908 Main, Arkadelphia 71923	1973
Richard C. Petty, P. O. Box 638, Star City 71667	1973
IMMUNIZATION SUB-COMMITTEE	
Wilbur G. Lawson, 207 East Dickson, Fayetteville 72701—*CHAIRMAN*	1971
Howard R. Harris, 207 South Elm, Dumas 71639	1971
Jooseph L. Rosenzweig, 236 Woodbine, Hot Springs 71901	1972
Thomas E. Townsend, 1310 Cherry, Pine Bluff 71601	1972
Vida H. Gordon, 4301 West Markham, Little Rock 72205	1973
Charles E. Kemp, 809 Cobb, Jonesboro 72401	1973
SUB-COMMITTEE ON TRAFFIC SAFETY	
Lonnie R. Turney, Second and Pine, McGehee 71654	1971
Louise M. Henry, 602 Garrison, Fort Smith 72901	1972
James G. Stuckey, Jr., 500 South University, Little Rock 72205	1972
Albert R. Hammon, 520 North Spring, Harrison 72601	1972
J. Warren Murry, 1749 North College, Fayetteville 72701	1972
Carl L. Williams, 522 South 16th, Fort Smith 72901—*CHAIRMAN*	1973
John P. Burge, 434 South Cokley, Lake Village 71653	1973
SUB-COMMITTEE ON LIAISON WITH VOCATIONAL REHABILITATION	
Major E. Smith, 124 East Peddicord, Dermott 71638	1971
Paul G. Henley, 700 West Faulkner, El Dorado 71730—*CHAIRMAN*	1971
James D. Mashburn, 207 East Dickson, Fayetteville 72701	1971
Rhys A. Williams, 651 North Spring, Harrison 72601	1972
Robert H. Atkinson, 236 Central, Hot Springs 71901	1972
John P. Wood, 907 Mena, Mena 71953	1973
H. King Wade, Jr., 231 Central, Hot Springs 71901	1973
COMMITTEE ON MEDICAL EDUCATION	
Winston K. Shorey, 4301 West Markham, Little Rock 72205	1971
Oliver C. Raney, 1720 West 42nd, Pine Bluff 71601	1971
Marlin B. Hoge, 314 North Greenwood, Fort Smith 72901	1972
W. H. Calaway, North Arkansas Clinic, Batesville 72501	1972
John L. Ruff, 104 Hospital Road, Magnolia 71753	1973
Lee B. Parker, Jr., 421 West Spring, Fayetteville 72701—*CHAIRMAN*	1973
COMMITTEE ON CONTINUING EDUCATION	
James S. Taylor, 4301 West Markham, Little Rock 72205	1971
James K. Patrick, 241 West Spring, Fayetteville 72701	1971
T. A. Feild, III, 3600 North "O" Street, Fort Smith 72901	1971
Bobby E. McKee, 505 East Matthews, Jonesboro 72401	1971
George F. Wynne, 113 West Cypress, Warren 71671—*CHAIRMAN*	1972
Claude F. Peters, 1420 Potts, Malvern 72104	1973
COMMITTEE ON HOSPITALS	
George B. Talbot, 1421 Cherry, Pine Bluff 71601	1971
John P. Wood, 907 Mena, Mena 71953	1971
Wright Hawkins, 100 South 14th, Fort Smith 72901	1972
Haymond Harris, 1205 McLain, Newport 72112	1972
Art B. Martin, 1500 Dodson, Fort Smith 72901—*CHAIRMAN*	1973
George K. Mitchell, P. O. Box 2181, Little Rock 72203	1973
COMMITTEE ON PUBLIC RELATIONS	
Gordon P. Oates, 1612 Maryland, Little Rock 72202	1971
Paul A. Wallick, 216 South Main, Monticello 71655	1971
A. C. Bradford, 100 South 14th, Fort Smith 72901—*CHAIRMAN*	1972
G. Allen Robinson, 707 North Vine, Harrison 72601	1972
G. Thomas Jansen, 500 South University, Little Rock 72205	1973
Joe W. Reid, 618 Caddo, Arkadelphia 71923	1973
SUB-COMMITTEE ON LIAISON WITH THE AUXILIARY	
Amail Chudy, 1801 Maple, North Little Rock 72114—*CHAIRMAN*	1971
Karlton H. Kemp, 408 Hazel, Texarkana 75501	1971
Charles F. Wilkins, Jr., 3005 West Main Place, Russellville 72801	1971
Marion H. Wilmoth, 14th & Leslie, Nashville 71852	1971
John P. Wood, 907 Mena, Mena 71953	1971
SUB-COMMITTEE ON STATE HEALTH AND MEDICAL RESOURCES FOR CIVIL DEFENSE	
Kenneth R. Duzan, 443 West Oak, El Dorado 71730	1971
Monroe D. McClain, 1120 Marshall, Little Rock 72202	1971
Edgar J. Easley, State Health Department, Little Rock 72205—*CHAIRMAN*	1971
Louis U. Rushing, P. O. Box 1912, Texarkana 75501	1971
Russell W. Cobb, 1420 Potts, Malvern 72104	1971
William B. Harrell, Jr., 317 State Line, Texarkana 75501	1972
Hugh R. Edwards, 607 Woodruff, Searcy 72143	1973
ADVISORY COMMITTEE TO THE MEDICAL ASSISTANTS SOCIETY	
Millard W. Black, 705 North Ash, Little Rock 72205	1971
A. C. Bradford, 100 South 14th, Fort Smith 72901—*CHAIRMAN*	1971

	Term Expires
Betty A. Lowe, 401 East Fifth Street, Texarkana 75501	1971
George C. Burton, 427 West Oak, El Dorado 71730	1972
James D. Mashburn, 207 East Dickson, Fayetteville 72701	1972
John L. Dedman, Jr., 415 Hospital Drive, S.W., Camden 71701	1973
COMMITTEE ON VETERANS ADMINISTRATION AFFAIRS	
A. J. Forestiere, P. O. Box 106, Harrisburg 72432—*CHAIRMAN*	1971
John H. Delamore, 1100 West Third, Fordyce 71742	1971
J. Arnold Henry, 3005 West Main Place, Russellville 72801	1971
E. Z. Hornberger, Jr., P. O. Box 3006, Fort Smith 72901	1971
Chalmers S. Pool, VA Hospital, North Little Rock 72114	1972
Joseph W. Ledbetter, 804 South Church, Jonesboro 72401	1973
COMMITTEE ON INSURANCE	
Charles F. Wilkins, 3005 West Main Place, Russellville 72801	1971
L. J. Pat Bell, 626 Poplar, Helena 72342	1971
J. Harry Hayes, Jr., 500 South University, Little Rock 72205—*CHAIRMAN*	1972
T. S. Van Duyn, P. O. Box 110, Stuttgart 72160	1972
John D. Wright, 321 Short, Benton 72015	1973
James R. Weber, 1110 West Main, Jacksonville 72076	1973
COMMITTEE ON LIAISON WITH THE NURSING PROFESSION	
J. R. Pierce, Jr., 1712 West 42nd, Pine Bluff 71601	1971
James D. Harbison, 505 Union, Dardanelle 72834	1971
Robert H. Whitehead, Jr., Donaghey Building, Little Rock 72201	1972
Fred C. Inman, Jr., Court Street, Carlisle 72024	1972
Frank T. Padberg, 500 South University, Little Rock 72205—*CHAIRMAN*	1973
Elbert H. Wilkes, 5322 West Markham, Little Rock 72205	1973
COMMITTEE ON MEDICINE AND RELIGION	
Kenneth A. Siler, 651 North Spring, Harrison 72601	1971
Fred Gordy, 552 Locust, Conway 72032	1971
C. Randolph Ellis, 1004 South Main, Malvern 72104	1972
John H. Miller, 415 Hospital Drive, S.W., Camden 71701	1972
Alvin W. Stranss, Jr., 110 East 7th, Little Rock 72201	1973
COMMITTEE ON ARRANGEMENTS FOR ANNUAL SESSION	
Joseph L. Rosenzweig, 236 Woodbine, Hot Springs 71901	1971
John McCollough Smith, 4000 Woodlawn, Little Rock 72205	1971
Art B. Martin, 1500 Dodson, Fort Smith 72901	1971
Joseph S. Robinette, 1722 Doctors Drive, Pine Bluff 71601	1971
Betty A. Lowe, 401 East Fifth, Texarkana 75501	1971
A. S. Koenig, 922 Lexington, Fort Smith 72901	1972
Wright Hawkins, 100 South 14th, Fort Smith 72901	1972
Dwight W. Gray, 110 West Chestnut, Marianna 72360	1972
Winston K. Shorey, 4301 West Markham, Little Rock 72205—*CHAIRMAN*	1973
Gilbert S. Campbell, 4301 West Markham, Little Rock 72205	1973

COUNCIL APPOINTED COMMITTEES

COMMITTEE ON CONSTITUTIONAL REVISION

Lee B. Parker, Jr., 241 West Spring, Fayetteville 72701—*CHAIRMAN*
J. Harry Hayes, Jr., 500 South University, Little Rock 72205
Paul L. Rogers, P. O. Box 3096, Station A, Fort Smith 72901
H. King Wade, Jr., 231 Central, Hot Springs 71901
Ross E. Maynard, National Building, Pine Bluff 71601

BUDGET COMMITTEE

W. R. Brooksher, P. O. Box 3096, Station A, Fort Smith 72901—*CHAIRMAN*
H. W. Thomas, 105 North Freeman, Dermott 71638
Ben N. Saltzman, 126 West 6th, Mountain Home 72653

SENIOR MEDICAL DAY COMMITTEE

Ralph A. Downs, 5512 West Markham, Little Rock 72205—*CHAIRMAN*
Calvin R. Simmons, 1714 West 42nd, Pine Bluff 71601

LIAISON COMMITTEE WITH STATE WELFARE DEPARTMENT

(Composed of Executive Committee)

PHYSICIAN TO WORK WITH AMA COMMITTEE ON QUACKERY

Frank M. Burton, 101 Whittington, Hot Springs 71901

COMMITTEE ON PHARMACY

Willie R. Harris, England Hospital, England 72046—*CHAIRMAN*
Art B. Martin, 1500 Dodson, Fort Smith 72901
Martin F. Heigden, 1808 West Main, Russellville 72801

ARKANSAS STATE ADVISORY COMMITTEE TO THE SELECTIVE SERVICE SYSTEM

Joseph W. Ledbetter, 804 South Church, Jonesboro 72401
Edwin L. Dunaway, 919 Locust, Conway 72032
T. S. Van Duyn, P. O. Box 110, Stuttgart 72160
W. A. Regnier, P. O. Box 678, Crossett 71635
Allen R. Russell, 1024 Poplar, Pine Bluff 71601
James F. Clark, 524 West Faulkner, El Dorado 71730
Gerald H. Teasley, 401 East 5th, Texarkana 75501—*CHAIRMAN*
Frank M. Burton, 101 Whittington, Hot Springs 71901
John T. Herron, 4815 West Markham, Little Rock 72205

Robert A. Calcote, Donaghey Building, Little Rock 72201
Ulys Jackson, 118 South Pine, Harrison 72601
Friedman Sisco, 101 South Shilo, Springdale 72764
L. A. Whittaker, Jr., 708 Lexington, Fort Smith 72901

21-MAN COMMITTEE (Fee Committee)

General Practice:
Joe Verser, P. O. Box 106, Harrisburg 72432
C. Lewis Hyatt, 515 North Main, Monticello 71655

Radiology:
William J. Rhinehart, Donaghey Building, Little Rock 72201

Pathology:
Kenneth R. Duzan, 443 West Oak, El Dorado 71730

Internal Medicine:
Clyde Tracy, 1421 Cherry, Pine Bluff 71601
Charles F. Wilkins, 3005 West Main Place, Russellville 72801

General Surgery:
Wright Hawkins, 100 South 14th, Fort Smith 72901
Gilbert O. Dean, Donaghey Building, Little Rock 72201

Urology:
Carl L. Wilson, 1500 Dodson, Fort Smith 72901

Allergy:
Purcell Smith, Jr., 4001 West Capitol, Little Rock 72205

Anesthesiology:
John L. Weare, 1120 Marshall, Little Rock 72202

Dermatology:
A. C. Bradford, 100 South 14th, Fort Smith 72901

Ophthalmology:
James L. Smith, 623 Woodlane, Little Rock 72201

ENT:
E. L. Milner, 500 South University, Little Rock 72205

Obstetrics-Gynecology:
Robert F. McCrary, Meyer Building, Hot Springs 71901

Neurology and Neurosurgery:
Robert Watson, Donaghey Building, Little Rock 72201

Psychiatry:
Frank Westerfield, Jr., 1120 Marshall, Little Rock 72202

Pediatrics:
Thomas E. Townsend, 1310 Cherry, Pine Bluff 71601

Orthopedics:
Elvin Shuffield, 1000 Wolfe, Little Rock 72202

CHAIRMAN:
C. C. Long, 110 West Commercial, Ozark 72949

President:
Jack W. Kennedy, 1008 Pine, Arkadelphia 71923

President-elect:
Stanley Applegate, Springdale 72764

Chairman of Council:
C. C. Long, Ozark

STUDENT AMA LIAISON COMMITTEE
Alfred Kahn, Jr., 1300 West Sixth, Little Rock 72201—*CHAIRMAN*
Elvin Shuffield, 1000 Wolfe, Little Rock 72202
William A. Snodgrass, Jr., Donaghey Building, Little Rock 72201
Thomas D. Honeycutt, 4124 West 11th, Little Rock 72204

COMMITTEE FOR CORRELATION OF GOVERNMENT PLANS
L. A. Whittaker, Jr., 708 Lexington, Fort Smith 72901—*CHAIRMAN*
Winston K. Shorey, 4301 West Markham, Little Rock 72205
G. Thomas Jansen, 500 South University, Little Rock 72205
John T. Herron, 4815 West Markham, Little Rock 72205
Ben N. Saltzman, 126 West Sixth, Mountain Home 72653
Roger B. Bost, 4301 West Markham, Little Rock 72205
T. A. Feild, III, 3600 North "O," Fort Smith 72901
Jerome S. Levy, 500 South University, Little Rock 72205

MEDICAL STUDY COMMITTEE TO THE DEPARTMENT OF CORRECTION
Walter J. Wilkins, Jr., 1421 Cherry, Pine Bluff 71601—*CHAIRMAN*
Joe B. Scruggs, 1612 Maryland, Little Rock 72202
Wayne Lazenby, 145 West Waterman, Dumas 71639
Thomas J. Smith, 900 North University, Little Rock 72207
William O. Young, Donaghey Building, Little Rock 72201
Paul G. Henley, 700 West Faulkner, El Dorado 71730
Howard Schwander, 1115 Bishop, Little Rock 72202

COMMITTEE ON EMERGENCY HEALTH SERVICES
Robert M. Bransford, 401 East 5th, Texarkana 75501—*CHAIRMAN*
Ben N. Saltzman, 126 West Sixth, Mountain Home 72653
J. Warren Murry, 1749 North College, Fayetteville 72701
Art B. Martin, 1500 Dodson, Fort Smith 72701
John P. Wood, 907 Mena, Mena 71953

MRS. C. LYNN HARRIS

Hope

President, 1970-1971

WOMAN'S AUXILIARY TO THE

ARKANSAS MEDICAL SOCIETY

WOMAN'S AUXILIARY TO ARKANSAS MEDICAL SOCIETY STATE CONVENTION — 1970

The Woman's Auxiliary to the Arkansas Medical Society 46th Annual Convention was held April 27-28, 1970, at the Arlington Hotel, Hot Springs, with Mrs. Carl Parkerson, President, presiding.

Dr. Ross Fowler, President, brought greetings from the Arkansas Medical Society. Mr. Paul Schaefer, Executive Vice President of the Arkansas Medical Society, expressed appreciation for the continuing support of the Auxiliary. Mrs. R. C. L. Robertson, President-elect of the Woman's Auxiliary to the American Medical Association was recognized.

Mrs. James French, President, Garland County Auxiliary, welcomed the Convention to Hot Springs. The response was given by Mrs. Harold Langston.

An amendment to the state constitution of the Auxiliary concerning finance was adopted. Oral reports were given by committee chairmen and officers.

A resolution honoring Mrs. Jack Kennedy was read. Mrs. Kennedy resigned following 13 years' service as chairman of the Finance Committee. The resolution conferred a lifetime membership in the Woman's Auxiliary to the Arkansas Medical Society on Mrs. Kennedy.

Mrs. Robert Lee Hill, Registration chairman, reported one hundred sixteen (116) registrations.

Mrs. Gordon Oates gave the report of the Resolutions Committee.

Mrs. R. C. L. Robertson was the guest speaker on Monday when the Garland County Auxiliary served as hostesses for a luncheon in Cafe 2 of the Arlington Hotel. Mrs. Robertson had a

Past Presidents of the Auxiliary at a breakfast on Tuesday morning, April 28, 1970. Reading from center foreground clockwise are: Mrs. Jack W. Kennedy, Mrs. James W. Branch, Mrs. Frank Padberg, Mrs. Art B. Martin, Mrs. Gordon P. Oates, Mrs. J. B. Crawford, Mrs. Warren S. Riley, Mrs. Marion H. Wilmoth, Mrs. C. E. Kitchens, Mrs. Charles F. Wilkins, Jr., Mrs. C. D. Burroughs, Mrs. Louis K. Hundley, Mrs. Curtis Jones, Sr., Mrs. Paul C. Schaefer (honorary member), Mrs. A. A. Little, Mrs. Hoyt Choate, and Mrs. John McCullough Smith.

timely message and was very well received. She titled her address "Yesterday, Today and Tomorrow."

The Auxiliary joined the Arkansas Medical Society in a Memorial Service paying tribute to those members who had died during the year. Mrs. Parkerson read the necrology list of the Woman's Auxiliary.

Mrs. Parkerson and Mrs. Lynn Harris, President-elect, were hostesses at a tea Monday afternoon honoring both the 1970 and 1971 Board.

Mrs. Charles Wilkins, chairman, reported that seventeen attended the Past Presidents' Breakfast on Tuesday morning in the Montague Room of the Arlington Hotel.

Hempstead County Auxiliary was hostess at a luncheon on Tuesday honoring President-elect Mrs. Harris. Mrs. Henry Kirby, representative to Southern Medical Association, presented Doctor's Day awards as follows: Societies over 25 members—1st, Garland; 2nd, Craighead-Poinsett; Honorable Mention—Sebastian, Washington. Societies under 25 members—1st, Boone; 2nd, Pope-Yell; Honorable Mention—Greene-Clay, Saline. Mrs. Gordon Peek, President, Southern Medical Association, brought special greetings to her neighboring state. Mrs. George Wright was luncheon chairman.

Mrs. Lynn Harris presented membership awards to: Boone, Bowie-Miller, Craighead-Poinsett, Phillips, Pulaski, Sebastian, Union, Washington, Independence, and members-at-large.

Mrs. Carl Welch, National President of the Woman's Auxiliary to the Student American Medical Association, brought greetings from her group. She noted that she was the second National President from Arkansas in the twelve years of the organization.

The following officers were installed by Mrs. Frank Padberg:

President—Mrs. Lynn Harris

President-elect—Mrs. Harold Langston

Northeast Vice President—Mrs. Asa Crow

Northwest Vice President—Mrs. W. E. King, Jr.

Southeast Vice President—Mrs. Carl Nash

Southwest Vice President—Mrs. Robert H. Nunnally

Secretary—Mrs. L. L. Shedd

Treasurer—Mrs. W. Syers Smith

In her President's message, Mrs. Harris urged the Auxiliary to be active in public relations, to be knowledgeable in health matters.

A Post-Convention Board meeting and school of information followed the adojurnment of the 46th Annual Convention.

EDITORIAL

Third Man Theme

Jack W. Kennedy, M.D.*

This past week CBS broadcast three programs which were entitled, The Promise and Practice, Don't Get Sick in America, Earth Science Day. The theme of thought conveyed to the public was the high cost of medical care, high cost of hospital care and that all medical and health costs were out of line as compared to present inflationary levels. A quote from one source in the educational field stated: "It costs too much to eat these days." Also indicated it costs too much for housing, clothing and bare necessities of life.

The programs above mentioned can be covered in one brief statement: The American physicians cannot be held responsible for the economic social ills of the country. We are unable to cope with the influx of uneducated, itinerant, displaced, wards of the United States Government. The lazy, shiftless, whites and blacks, the militants, the dropouts, hippies, homeless, the swelling welfare roles and increased Medicaid recipients. We are not financially or physically capable of resolving the situation and should not be shouldered with, be held responsible for their inadequacies and complaints. The United States Government will have to promote a program financially adequate to resolve a situation due to bureaucratic inefficiency. These people are wards of the government and not wards of the doctors of America.

Other newspaper headlines: Soaring Costs of Medicare-Medicaid, a Fault of the Doctors Because of Inadequate Policing of Hospital Costs, Not Curtailing Patient Participation, and Over Utilization of Bed Space. Greed a Major Factor Driving Medicare and Medicaid Programs to Bankruptcy. Another recent headline in the papers and national magazines, Guaranteed Incomes to Low Income Groups, this would add three million families to the present welfare program. This cannot possibly end the welfare *mess*—only add fuel for our socialistic government.

Recent proposals of federalization of health care, fixed fee basis for national health care, federal control of regional medical centers, national community health care plans. At the present time national costs of Medicare is sixty billion dollars while the government allocates only one and one-half billion for biological research. Now, the question arises, how much money should be spent for ineffective treatment and how much should be spent on research to produce definitive control of chronic diseases, within the framework of the present federal program. The effect of federal money poured into the various agencies will cause an institutionalization of poverty, which must not be allowed. The family assistance act, HR 16311, is a bad bill and it should be supplemented by a program of work for living rather than a dole for a living. The federalization of medical care dooms the fee for service concept that we now have and is destroying the free enterprise system which is the foundation of American medicine. You, of this generation, have seen the rise of American medicine, you are also seeing the fall. In considering the future we are confronted by the federal government as the faceless provider. A taken for granted patient, a resulting case number, an automated history, computerized diagnosis, and the loss of one physician-one man relationship.

In the seventies, the decade ahead of us, we can expect very little change in professional manpower. We can expect more responsibilities, more concentration of people in our cities and

*President, Arkansas Medical Society.

urban areas, consequently, more health needs. Arkansas would not be considered in the highly populated city class even though malnourished areas are existing. From recent reports there apparently is some lack of proper medical care and supervision in our rural areas. As the medical and health needs become greater, without a plan of action and without execution of a plan for delivery of health care, public opinion will generate greater political interference in the professional environments as we know them now. In providing care several areas must be corrected, with near well patients, that are professionally time consuming, time lost in menial procedures, also loss of planned time for the ill, acutely ill, this in turn driving quality medical care lower. Political action will be stimulated to provide more funds resulting in greater mismanagement, waste in available medical personnel, more bureaucratic involvement in the professional field.

Within a short time we must start considering, first—community education on utilization of medical and hospital resources. Secondly, readjustment of government financial allocations applied to curative medicine which is largely irrelevant to major chronic diseases. So long as medicine remains overwhelmingly oriented to treatment, rather than prevention, we will be deeper in our crisis.

To gain control of our medical environment we must produce a workable, feasible plan for total health care and we should be instrumental in training personnel for health care, (i.e.) doctors assistants, qualified people for sophisticated machines, etc.

Establish guide lines and mechanisms for delivery of these proposals.

In the words of Abraham Lincoln—if we would act anew, we must think anew and dethrall ourselves from beliefs of actions of the past. As Horace Mann once said, "I have never heard anything about resolutions of the Apostles—but I have heard a great deal about the Acts of the Apostles."

We should establish peer review committees with rotating memberships, state level planning committees for delivery of medical services and medication, and statewide district surveys to document our overall medical and health needs.

We must sanction and assist the updating and streamlining of the teaching procedures in our state institutions. Our medical schools have responded slowly and inadequately to the needs of new physicians. The total of the first year classes in 1968 numbered 9,479 students; by 1973 it is anticipated to be no more than 12,000.

Meanwhile, fortunately or unfortunately, depending on which side of the water you are on, the influx of foreign medical graduates, many of them U.S. citizens, continues unabated. In 1966 and 1967, the number of foreign medical graduates entering this country outnumbered the graduates of the U.S. schools 8,540 to 7,543. The number of foreign medical graduates licensed to practice from 1950 to 1968 totaled 22,966.

We must conclude then that university medical centers must expand immediately and they must amend themselves from the oh, so precious postulation, that the total flow of manpower will be determined by the valve like function of the basic science laboratories. We will have to work more than one shift in alleviating our medical education procedures. In other words, a year-round curriculum for our medical schools.

Another area of participation is support of a national health insurance. There is a plan now in process of being developed based on tax credit which will purchase health insurance from private carriers. This will enable people to have comprehensive health insurance coverage. A new concept in health care must be conceived to offset the continued rise of costs due to new techniques, more sophisticated office machinery. The average American will be unable to pay his health bill unless these provisions are carried out. We must take these steps to assume leadership, leaving the third man only as a silent participant. We cannot remain an island as physicians, nor remain aloof to the changing times.

We must be concerned citizens—concern for our local problems, such as education of patients, family counseling, pollution, malpractice insurance, developing assistance programs, and getting involved within the framework of our local professional environment. Our concern is not just state wide; we should think on a national level.

A projected plan for use in our state; use community hospitals and clinics as centers for community health, to act as catalyst for organization in developing plans for health and medical care, to act as referral centers and act as professional monitor of quality and quantity care rendered throughout the community or service area. Use as operational center for health services, a center for comprehensive health plan-

ning for directing decentralized health centers, such as private groups of physicians; neighborhood private physicians, clinics, first aid stations in isolated areas, supervision of long time care facilities and home health programs as well as supervision of rehabilitation, custodial and specialized care for the people of this particular area.

We are faced with a situation where all physicians must be hospital affiliated. This plan simply means that with proper assistance, patients are to be screened into categories of very sick, sick, early sick, and preventive care. With the proper medical and educational facilities, trained para-medical assistants to operate without constant physician supervision and be able to channel patients into areas indicated for their individual needs.

Let me quote this from the Wyoming Telegram: "Seven Steps to Stagnation"—

1. We are not ready for that.
2. We have never done it that way before.
3. We are doing all right without it.
4. We tried that once before.
5. It costs too much.
6. It's not a good time.
7. That is not our responsibility.

We have the energy—we need your help and especially your desire to participate and get involved in a crusade for physician leadership and not follow-ship.

Statement to Arkansas Medical Society by Colonel Ralph D. Scott, Director, Arkansas State Police.

THE "NUTTY" POSTCARD

This is the statement of a concerned cop. I am concerned because some of you are concerned about the "Concerned Citizen" postcard. Your reaction has been interesting and sometimes amusing. Two of the cards contained the printed word "Gestapo." They were not signed. Three were facetious. They were not signed either. Several reported problem drivers. They were obviously submitted in good faith. I have had two letters. They recognized the problem, but did not see the "Concerned Citizen" postcard as the answer.

There seems to be two main objections to the notion of asking physicians to report problem drivers. Three newspapers have recognized the problem, but suggest that the postcard violates the confidential relationship between physician and patient. Some of the physicians apparently object to the notion that they have been requested to "inform" on their patients. Both objections may be valid. Neither may be. It is difficult to be objective. It is easy to rationalize. Response depends in large measure upon the eye of the beholder.

The main reason for this statement is to assure the doctors that the Director of the Arkansas State Police does not deliberately encourage unethical or suspect police procedures. If you feel this was a "nutty" idea, then you have it in your power to destroy it utterly. All you have to do is ignore the cards. If you feel some inclination to respond, you may be sure that a driver's license cannot be revoked or suspended except by due process. A person who is not a problem driver has nothing to fear from a postcard.

I think this small episode has been constructive. We are certainly in agreement that a problem exists and, at best, the "Concerned Citizen" postcard is but an ineffectual expedient. The real solution, as you have pointed out, is the enactment of legislation which would require proper examination and periodic re-examination. The physicians, the police, the State Revenue Department, and all other concerned citizens, should work for the early enactment of such legislation.

In the meantime, the problem will not go away, and many people will die needlessly. The Arkansas Medical Society and the press are encouraged to submit constructive criticism. Surely there is some logical answer. Your suggestions will be most welcome. We are certainly not unmindful of your concern, and we appreciate the resolution commending the Arkansas State Police which is published in the program for this meeting.

MEDICINE IN THE NEWS

Dr. Fowler Presents University of Arkansas Medical School $7,492

Dr. Ross Fowler, president of the Arkansas Medical Society, delivered to Dr. Winston K. Shorey, Dean of the University of Arkansas School of Medicine, a check for $7,492 on behalf of the American Medical Association and Research Foundation (AMA-ERF) in mid-April.

Much of this grant goes to the Medical Education Loan Program. Together with a sum presented last November, the amount granted this year totals $10,000. The Woman's Auxiliary is instrumental in raising the funds. Mrs. Carl Parkerson of Hot Springs served as its president during the past year. Mrs. Charles Wilkins of Russellville serves as regional chairman of the Woman's Auxiliary to the American Medical Association Committee on AMA-ERF.

THINGS TO COME

COURSE IN CORONARY CARE OFFERED AT MEDICAL CENTER

Arkansas physicians in private practice now have the opportunity to learn the latest techniques in coronary care. The Physician's Course in Coronary Care began at the University of Arkansas Medical Center in March, 1970, and is supported by a grant from the Arkansas Regional Medical Program.

The five-day course, directed by Dr. Jack L. Davis, director of the University of Arkansas Medical Center Coronary Care Unit, and an instructor in medicine, is scheduled each month throughout the year.

The course is composed of forty hours of discussion, lecture and practical clinical experience and has been officially approved for Category I hours by the American Academy of General Practice. Subject matter includes an initial discussion of the current concepts of coronary care which sets the perspective for the course material to be presented.

Inquiries regarding the physician's course should be directed to Dr. Davis at the Medical Center.

EDUCATIONAL COURSE ANNOUNCEMENT

A continuation course on "Current Practice of Clinical Electroencephalography" will be held September 14-16, 1970, in Washington, D. C. The course is designed to review the principal applications of the EEG to clinical medical practice, and is sponsored by the American Electroencephalographic Society.

Inquiries about further details of the course or registration procedure should be addressed to Dr. Donald W. Klass, EEG Course Director, Mayo Clinic, Rochester, Minnesota 55901.

NEW CLAIMS PROCEDURE

A new procedure for processing disability claims filed with Social Security Administration Offices is effective April 30, 1970. Under the new procedure the primary responsibility for assisting disability claimants in obtaining initial medical evidence in support of their claims is shifted from the Social Security Offices to an agency of the State, the State Department for Social Security Administration Disability Determination, Little Rock.

While claimants for disability benefits have always been responsible for furnishing initial medical evidence in support of their claims, the Social Security Offices often assisted claimants

in requesting medical evidence from their treating physicians. Now the State Department for Social Security Disability Determination will assist claimants in requesting evidence from their treating physicians and from hospitals. This does not modify the existing policy that the claimant is responsible for furnishing medical evidence of record and for any changes or fees involved.

In cooperation with the Social Security Administration, the State Department for Social Security Administration Disability Determination makes disability decisions for Arkansas residents. As the physicians gain experience in assisting claimants with their requests for medical evidence, they expect to be able to refine requests and seek more specific information, thus lightening the paper work burden of treating physicians.

The important thing to remember is that the State Agency will now assist the disability claimant in requesting medical evidence of record from his treatment sources, and the number of requests on behalf of claimants from Social Security Offices should be substantially eliminated.

For further information, contact Mr. Wayne Lofton, Director of Disability Determinations, Room 400, 1515 West Seventh Street, Little Rock, Arkansas, or your nearest Social Security Office.

OBITUARY

Dr. T. G. Price

Dr. Thomas G. Price of Wynne died April 8, 1970. He was sixty-two years old.

Born in Rogersville, Tennessee, in 1907, Dr. Price received his pre-medical education at the University of Tennessee and, subsequently, his medical degree from that institution's School of Medicine in 1936.

Dr. Price began his practice of medicine in Wynne in 1938, but spent four years during World War II in service of the United States Navy, returning to Wynne in 1946.

He was a member of the Cross County and Arkansas Medical Societies and the American Medical Association. Dr. Price was also a charter member of the Wynne Lions Club and a 32nd degree Mason.

Dr. Price is survived by his wife, Mrs. Winnie Armstrong Price, and one daughter.

* * *

Dr. Theodore C. Panos

Dr. Theodore C. Panos died April 15, 1970, at the age of 55.

Born in St. Louis in 1915, Dr. Panos received his Bachelor's degree in 1938 and his medical degree in 1942, both from the State University of Iowa.

In 1958, Dr. Panos joined the faculty of the University of Arkansas School of Medicine as professor and chairman of the Department of Pediatrics. As a leading figure in pediatrics nationally, he served as an official examiner with the American Board of Pediatrics and helped to design the controlled tests of the newly developed rubella vaccine.

Dr. Panos served in various positions in the American Institute of Nutrition, the Endocrine Society, the Society for Pediatric Research, the American Academy of Pediatrics, and the American Pediatric Society. He was a member of the Pulaski County and Arkansas Medical Societies and the American Medical Association.

He is survived by his wife and two daughters.

PROCEEDINGS OF SOCIETIES

Sebastian County Medical Society Sponsors Drug Information Day

May 6th was Drug Information Day in Fort Smith. Launched as the first step in developing a continuous and comprehensive drug abuse education program for the Sebastian County area, the day was sponsored by the Sebastian County Medical Society and City-County Health Offices.

The day culminated activities which included speeches by local physicians to ten civic clubs and the distribution of educational pamphlets on amphetamines, barbiturates, and marijuana to the city's some 3,000 plus high school students.

Keynote speaker for the May 6th activities was Dr. James Dusenberry, University of Arkansas School of Pharmacy, who spoke to some 1,600 teen-agers during the afternoon and climaxed the program by addressing 500 concerned citizens in an evening assembly at the local Civic Auditorium. The audience included all the area's delegation to the Arkansas General Assembly, judges, and city board as well as representatives of all interested city organizations.

Arrangements were handled by a committee of the county medical society headed by Dr. Charles Floyd and composed of Dr. Kemal Kutait, Dr. A. C. Bradford, and Dr. William B. Stanton, president of the local society. Dr. L. A. Whittaker, City-County Health Officer, served on the committee and acted as master of ceremonies for the evening program.

PERSONAL AND NEWS ITEMS

Dr. Lewis New Heart Association President

Dr. W. Sexton Lewis of Little Rock has been elected president of the Arkansas Heart Association to serve 1970-71.

Children's Hospital Has New Chief of Staff

Dr. Robert M. Stainton of Little Rock has been elected to a two-year term as chief of staff for the Arkansas Children's Hospital. He succeeds Dr. William L. Steele.

Dr. Jones Elected President of Dermatologists

Dr. William N. Jones was elected president of the Arkansas Dermatological Society for the ensuing year. The election took place at the Society's annual meeting in Little Rock April 11-12.

ARK-PAC Elections Held

ARK-PAC elections were held at the recent annual session of the Arkansas Medical Society. Dr. William S. Orr of Little Rock was elected chairman. Dr. A. C. Bradford of Fort Smith and Mrs. W. Payton Kolb were chosen treasurer and secretary, respectively. Other board members elected were:

1. Dr. James Armstrong, Ashdown
2. Dr. Henry A. Crane, Jr., Pine Bluff
3. Dr. Asa Crow, Paragould
4. Dr. Kenneth R. Duzan, El Dorado
5. Dr. Ross Fowler, Harrison
6. Dr. Francis M. Henderson, Pine Bluff
7. Dr. T. E. Townsend, Pine Bluff
8. Dr. Paul A. Wallick, Monticello
9. Mrs. C. Lynn Harris, Hope

AAGP Re-elects Three

Dr. William H. Breit, Harrison; Dr. Jimmie Elwyn Lytle, Batesville; and Dr. Richard C. Petty, Star City, have all been recently re-elected to active membership in the American Academy of General Practice.

Dr. Robinson Named to AAGP Committee

Dr. Guy U. Robinson of Dumas has been appointed to a one-year term on the Committee on By-Laws and Constitution of the American Academy of General Practice. Dr. Robinson currently serves as president of the Arkansas Academy.

Bull Shoals Medical Clinic Open

The new Bull Shoals Medical Clinic, a five-room facility located in the Village Mart Shopping Center, was opened in late April by Dr. Wiley R. Marvel of Mountain Home.

Dr. Saltzman Speaks on Drug Abuse

Mountain Home physician Ben N. Saltzman recently spoke to the students and faculties of high schools at Oxford, Violet Hill, and Mount Pleasant on "Drug Use and Abuse."

Thirty Years of Practice Honored in Fort Smith

Doctors with thirty years of practice or more were honored by the Woman's Auxiliary to the Sebastian County Medical Society in Fort Smith

Ben N. Saltzman, M.D., (right) Mountain Home, Ark., receives American Medical Association Certificate of Appreciation from L. J. Snyder, Chairman of the AMA Council on Rural Health, at the 23rd National Conference on Rural Health held in Milwaukee, Wis., April 9-10. Dr. Saltzman, a member of the Council since 1960, served as its chairman from 1966-68.

at Hardscrabble Country Club. Honorees included Doctors William Brooksher, Ralph Crigler, Thomas Foltz, Davis Goldstein, Louise and Lewis Henry, Frederick H. Krock, E. A. Mendelsohn, Roy Schirmer, Morgan Scott, William Shippey, and Merle Woods.

Doctors Serve on Drug Education Panel

Dr. Jack Edmisten, Fayetteville psychiatrist, and Dr. John Vinzant, physician and Washington County coroner, were panelists on an April drug abuse education seminar in Fayetteville. Held at a local junior high, the program was attended by more than 400 parents and young people.

Dr. Warren Announces Associate

Dr. George W. Warren of Smackover announced recently the association with him at Warren Clinic of Dr. Kenneth W. Koldys.

Dr. Egeberg Keynoter at Public Health Association Annual Meeting

Dr. Rodger Egeberg, assistant secretary for health and scientific affairs, Department of Health, Education and Welfare, was the keynote speaker at the annual meeting of the Arkansas Public Health Association, Inc. Speaking at the opening session, Dr. Egeberg was introduced by Dr. Jack Kennedy, Arkansas Medical Society President. Dr. Rex C. Ramsey, Jr., is president of the Public Health Association and presided at the meeting.

Dr. Clopton Develops Coronary Care Facility

Under the professional guidance of Dr. Owen H. Clopton, St. Bernard's Hospital in Rector has conceived and developed a coronary care facility which will be electronically monitored and constantly staffed by an especially trained team of eight registered nurses and 34 licensed practical nurses.

NEW MEMBERS

DR. J. E. SEALE, JR., is a new member of the Union County Medical Society.

Born in Laurel, Mississippi, Dr. Seale received his pre-medical education at the University of Mississippi and also his M.D. from that institution's School of Medicine in 1966.

Since graduation, Dr. Seale has completed his internship at the Mobile General Hospital, Mobile, Alabama. In addition, he has served two years active duty as a captain in the United States Army.

His office address is 528 West Faulkner, El Dorado, and he is engaged in general practice.

* * *

Crittenden County Medical Society announces DR. JOHN McQUISTON WILSON as a new member.

A native of Burlison, Tennessee, Dr. Wilson received both his pre-medical education at the University of Tennessee and his M.D. from that University's School of Medicine, Class of 1937.

After interning at Knoxville General Hospital and a residency in radiology at the John Gaston Hospital in Memphis, Dr. Wilson has been an instructor in radiology at the University of Tennessee School of Medicine. He is board certified and holds memberships in the American College of Radiology and the North American College of Radiology.

His office address is 955 Madison Avenue, Memphis. Dr. Wilson serves as radiologist for Crittenden Memorial Hospital in West Memphis.

* * *

Pulaski County Medical Society announces six new additions to its membership rolls.

DR. WARREN CLARK BOOP, JR., was born in Baltimore, Maryland, and attended high school in Knoxville, Tennessee. From the University of Tennessee, he subsequently received both the B.S. and M.D. degrees, the latter from the School of Medicine in 1956. An M.S. in Neurosurgery was obtained from the University of Minnesota where a residency in that specialty was also completed.

Dr. Boop interned at Baroness Erlanger Hospital in Chattanooga and did a general surgery residency at St. Mary's Hospital in Knoxville.

His professional memberships include the Harvey Cushing Society and the Congress of Neurological Surgeons.

Currently, Dr. Boop is an Associate Professor of Neurosurgery at the University of Arkansas Medical Center in Little Rock.

* * *

DR. HAROLD ALVIN DECKER is a native of Salt Lake City, Utah, and attended the University of Utah, located in Salt Lake, and received his B.S. degree and, subsequently, his M.D. from its School of Medicine in 1957.

Following his internship at Veteran's Administration Hospital in Oklahoma City, Dr. Decker did a residency in pediatrics at the University of Oklahoma Hospital in Oklahoma City and also a residency in that specialty at Salt Lake City General Hospital.

Certified by the American Board of Pediatrics, Dr. Decker is a member of the American Academy of Pediatrics, the American Public Health Association, the American Association on Mental Deficiency, and the Association of Teachers of Maternal and Child Health.

Formerly Assistant Professor of Maternal and Child Health at the University of Michigan, Dr. Decker is now Associate Professor of Pediatrics at the University of Arkansas Medical Center.

* * *

DR. ELEANOR POLK DEED is a native of Texarkana, Texas.

In 1952, she received her B.A. degree from Henderson State Teacher's College in Arkadelphia. Graduating from the University of Arkansas School of Medicine in 1956, she interned at the University of Arkansas Medical Center and also completed a radiology residency there.

In 1963, Dr. Deed was certified by the American Board of Radiology.

From 1960 to the present, Dr. Deed has held a teaching appointment in radiology from the University of Arkansas Medical Center.

* * *

DR. ROBERT E. GLENN was born in Memphis, Tennessee.

Dr. Glenn graduated from Arkansas A. & M.

College in 1961 with the B.S. degree. In 1965, he received the M.D. degree from the University of Arkansas School of Medicine.

Dr. Glenn did his internship at the University of Arkansas Medical Center and also his residency in pediatrics under that institution's auspices.

Dr. Glenn, who served four years in the United States Air Force, is currently practicing pediatrics at 516 Pershing, North Little Rock.

* * *

DR. MICHAEL GARNETT KEERAN of Lawton, Oklahoma, is now practicing medicine in Little Rock.

Dr. Keeran's pre-medical education was obtained at Cameron Junior College in Lawton and at the University of Oklahoma before he was graduated from the latter's School of Medicine in 1963.

After interning at University Hospital in Ann Arbor, Michigan, he returned to the Oklahoma Medical Center in Oklahoma City to do two residencies, one in internal medicine and another in dermatology.

A member of Alpha Omega Alpha, Dr. Keeran is engaged in the practice of dermatology at 500 South University, Little Rock.

* * *

DR. HAROLD DAVID PURDY was born in DeWitt.

His pre-medical education was completed at Little Rock University in 1961. Thereupon, he entered the University of Arkansas School of Medicine and graduated with his M.D. in 1965.

Dr. Purdy did his internship at St. Vincent Infirmary during 1965-66.

Prior to beginning his medical education, he served three years active duty with the United States Army.

Dr. Purdy is a general practitioner. His offices are at 6924 Geyer Springs Road in Little Rock.

Saline County Celebrates Doctor's Day

Members of the Woman's Auxiliary to the Saline County Medical Society observed Doctor's Day with a dinner in the home of Dr. and Mrs. Quin Baber. The program was presented by Mrs. C. W. Jones, Sr. Mrs. D. L. Viner is president of the local Auxiliary.

Mrs. Harris Visits County Auxiliaries

Mrs. Lynn Harris, president of the Woman's Auxiliary to the Arkansas Medical Society, visited on May 5th and 6th, Auxiliaries in Benton, Washington and Boone counties.

Benton County: Coffee in the home of Mrs. Billy Puckett in Siloam Springs. Each of the seven towns with Auxiliary members in Benton County was represented.

Washington County: Dinner meeting with the Washington County Society.

Boone County: Luncheon at Holiday Inn with Auxiliary members. Fifteen of nineteen members were present.

At each of these county meetings, Mrs. Harris stressed the programs for the year: Drug Abuse Education and Health Career Recruitment.

Also, Mrs. Harris communicated with the Governor, and the Woman's Auxiliary to the Arkansas Medical Society has been added to the Governor's Task Force on Drug Abuse.

Late Results of Autogenous Vein Bypass Grafts in Femoropopliteal Arterial Occlusion

R. M. Baddeley et al (General Hosp, Birmingham, England)

Brit Med J 1:653-656 (March 14) 1970

The outcome of 185 consecutive autogenous vein bypass grafts, performed between January 1962 and June 1968, is reviewed. The operative mortality was 0.6% and a further 21 late deaths occurred. The overall five-year patency was 61.5%, but it was much lower when the popliteal tibial runoff arteries were diseased. Distal anastomosis of the graft below the level of the knee joint also impaired the results and the combination of this with a graft of minimal diameter less than 5 mm yielded sustained patency in only one-fourth of the number of limbs; however, where the risk of major amputation was high due to advanced ischemia, three out of four limbs were salvaged.

TUBERCULOSIS ABSTRACTS

Sponsored by Arkansas Tuberculosis and Respiratory Disease Association

METABOLIC CHANGES ASSOCIATED WITH THE CESSATION OF CIGARETTE SMOKING

Two-part study of seven volunteers, first while still smoking and again a month after they had stopped, revealed metabolic changes which could account in part for the undesirable weight gained by six participants.

Much effort has gone into convincing cigarette smokers that they should stop smoking since the cessation has been shown to reverse some adverse effects due to smoking. Frequently, however, persons who stop smoking gain weight in the succeeding weeks. Though this undesirable weight gain is often attributed to increased eating, due to some sort of psychological compensatory reaction, the cause is actually unknown. The present study of seven volunteer smoking scientists was undertaken to determine if the cessation of smoking was associated with any gross metabolic changes that could account, in part at least, for weight gain.

Each subject underwent two batteries of tests, the first one while still smoking and again after he had stopped smoking for a month. Both test series included a thorough physical examination, blood chemistry analysis, and pulmonary function tests.

For the first test the volunteers abstained from smoking as well as food and drink for at least 12 hours. The whole test procedure was administered in the supine position after a brief half-hour rest period.

Respiration rates were recorded during the initial phase of the examination while inspired and expired samples were collected for gas analysis and gas volume determinations. Temperature and blood pressure were taken by routine methods, as was a six-lead electrocardiogram using the limb leads.

Venous blood samples were collected in tubes without anticoagulant for serum cholesterol, calcium, and protein-bound iodine (PBI) determinations. Anticoagulated blood samples from the fasting participants were also used for blood glucose, hemoglobin and hematocrit measurements. Then each volunteer was given 150 ml of a 50 per cent glucose solution in ice. Another venous blood sample was drawn for a postprandial glucose determination a half hour later. Finally, subjects were permitted to stand for height and weight measurements.

Blood glucose determinations were derived from the ferricyanide reduction method adapted for the autoanalyzer; PBI analysis from the wet ash and ceric ammonium sulfate-arsenous acid method, also adapted for the autoanalyzer. Cholesterols were derived from the Pauvionsky method.

Hemoglobin concentration was determined spectrophotometrically, using Drabkin's reagent. The hematocrit was read in microcapillary tubes. Serum calcium levels were determined by atomic absorption spectroescopy.

Analysis of data was made in paired comparison, with each subject serving as his own control.

Histories revealed that the seven participants had smoked an average of 12.7 years and consumed an average of 1.4 packages of cigarettes daily. Only two had developed a chronic cough.

Average age for the seven was 31.4 years; the average height, 178.7 cm (70.21 inches).

CHANGE BETWEEN TEST PERIODS

Significant changes had occurred between the two test periods. The average weight rose from 83.29 kg (188.3 lb) to 87.33 kg (194.7 lb). The average body surface area, as measured against the nomogram of DuBois, rose from 2.03 meters squared to 2.05 meters squared. This increase was due to the increase in body weight.

The average blood pressure rose 113/73 mm Hg to 117/73; the average heart rate on ECG dropped from 60 beats to 57 beats per minute.

Stanley C. Glauser, M.D., Ph.D.; Elinor M. Glauser, M.D.; Marcus M. Reidenberg, M.D.; Ben F. Rusy, M.D.; and Ronald J. Tallarida, Ph.D., *Archives of Environmental Health* (Vol. 20), March, 1970.

The hematocrit remained constant (44.2 per 100 ml); so did blood glucose of fasting participants at an average of 87 mg/100 ml. However, the average 30-minute postprandial blood glucose level dropped from an average of 137 mg/100 ml before to 123 mg/100 ml after they quit smoking. The PBI dropped from 5.1 μg/100 ml to 4.6 μg/100 ml. The average hemoglobin rose from 13.3 gm/100 ml to 14.0 gm/100 ml, while the serum calcium dropped from 10.2 mg/100 ml to 9.7 mg/100 ml.

The average oxygen consumption dropped from 283 ml/min to 260 ml/min. The average carbon dioxide production dropped from 213 ml/min to 210 ml/min.

The respiratory quotient was calculated for each individual by dividing carbon dioxide production by oxygen consumption. The average respiratory quotient rose from 0.75 to 0.81. The average respiratory rate rose from 9 breaths per minute to 10 breaths per minute. Electrocardiographic patterns remained constant. Temperature remained constant at an average of 36.4 C (97.6 F).

Six of the seven volunteers gained weight during the month between tests. The seventh, who maintained his weight, reported a marked increase in activity.

Some of the other significant changes from the first test period to the second were the increases in body surface area and respiratory quotient, and decreases in PBI and serium calcium levels.

Especially significant was the decrease hyperglycemic response of the participants to a glucose meal after cessation of smoking while the blood glucose level when they were still fasting remained constant. The decreased heart rate was small but statistically significant.

METABOLIC CHANGE

All these changes suggest a metabolic change. Such a change could cause a decreased basal oxygen consumption. Such a decrease was noted in six of the seven participants in the present study. With no change in caloric intake or physical activity, this metabolic change would cause a weight gain.

Other known changes produced by smoking include an increased heart rate, blockage of normal metabolism of tryptophan, induction of benzpyrene hydroxylase in placental tissue, and decrease in carbonic anhydrase in fetuses. Nicotine has been shown to cause an increase in tryptophan pyrrolase and in the rate of metabolism of ethylmorphine, norcodeine, and aniline.

The metabolic changes following the cessation of smoking described in this study may be one of the reasons for the weight gain observed. The authors suggest that weight gain may not be due solely to increased caloric intake without parallel physical activity, as is generally thought.

Increased Exposure of Tissues to Cortisol in Late Pregnancy

C. W. Burke and F. Roulet (Dept of Medicine, Royal Postgraduate Medical School, London) *Brit Med J* 1:657-659 (March 14) 1970

In late pregnancy there are changes in plasma and urine cortisol levels akin to those found in Cushing's syndrome. The mean day-night variation of non-protein-bound (i.e., biologically active) cortisol in plasma is reduced to 52% in late pregnancy, from a mean of 82% in nonpregnant subjects. Midnight levels of unbound cortisol in late pregnancy (mean 0.64μg/100 ml) are well above the nonpregnant normal (0.18μg/100 ml). Unbound cortisol levels are elevated also at 9 AM in late pregnancy (1.41μg/100 ml) compared with those in nonpregnant women (0.66μg/100 ml). These levels lead to increased urinary free cortisol excretion (mean 129μg/24 hr compared with 39μg/24 hr in normal subjects), and urinary free cortisol is a measure of the exposure of tissues to cortisol; exposure in late pregnancy is two to three times normal, judged by both plasma unbound and urinary free cortisol measurements. The increase in urinary free cortisol excretion in pregnancy is explained by the impaired day-night rhythm.

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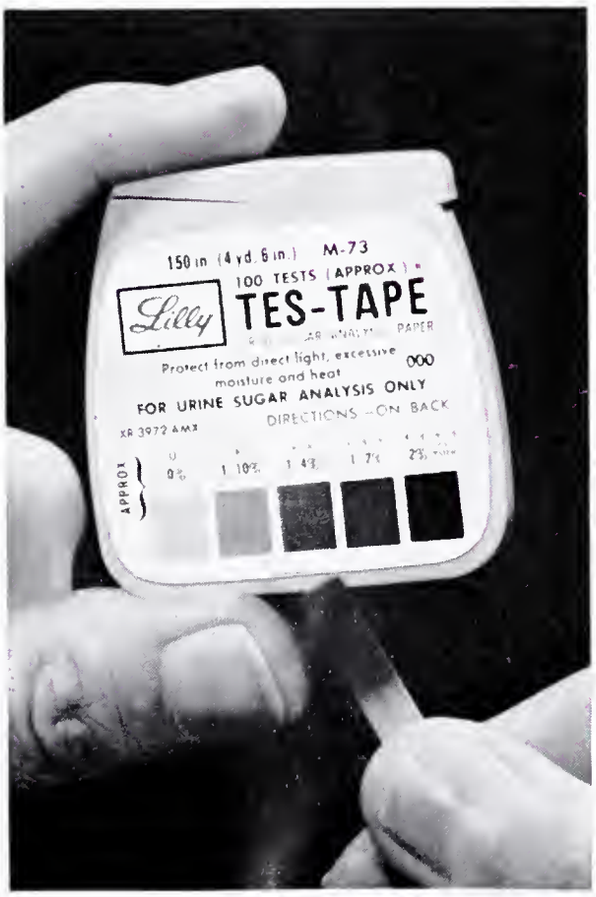

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CONTRAINDICATIONS: Thyrotoxicosis, acute myocardial infarction.

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Amyloidosis Presenting as Renal Failure in a Patient With A History of Tuberculosis 32 Years Ago

Don I. Scott, M.D.* and Harold J. White, M.D.**

Chronic renal failure is a clinical problem encountered frequently, the etiology of which can be quite varied. Although not a common cause, amyloidosis must be in the differential diagnosis of chronic renal failure, especially when a predisposing condition such as tuberculosis is present. The purpose of this paper is to discuss a case of secondary amyloidosis which presented as renal failure.

This 73-year-old male caucasian came to the hospital complaining of nausea and vomiting of six months duration accompanied by bloating, eructations and 20-pound weight loss. Abdominal pain, hematemesis, melena and jaundice were denied.

The patient was treated for tuberculosis of the spine in 1924 and underwent a right thoracoplasty in 1926. His chest film had been stable for many years and his tuberculosis was considered inactive (Fig. 1). In 1969 he underwent transurethral resection for benign prostatic hypertrophy and postoperatively required urethral dilatations for stricture.

Physical examination revealed an elderly male in no distress. Blood pressure 140/80, pulse 80, temperature 98.0. There was evidence of an old

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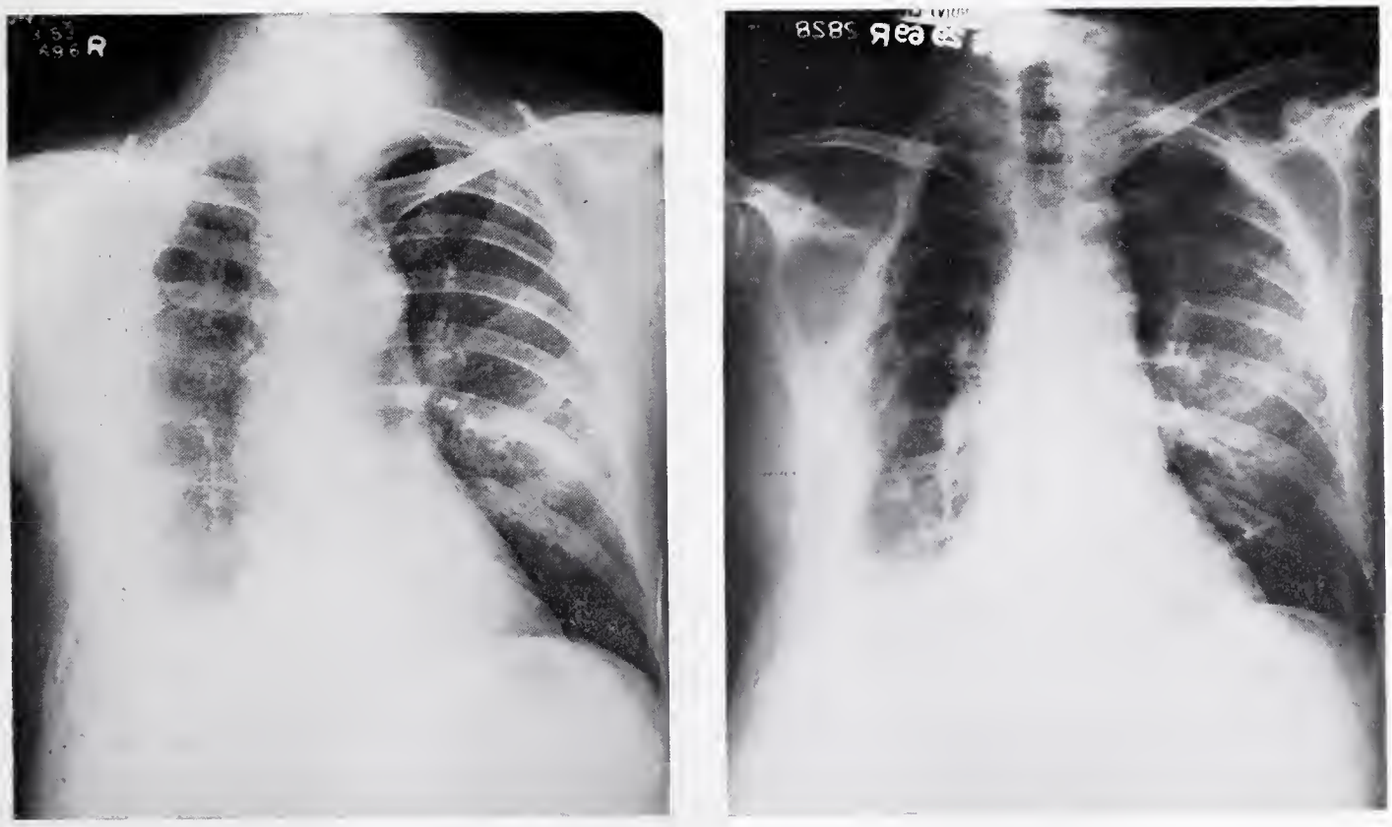
Figure 1



(a) Chest film taken in 1953 as compared with a film taken on the last admission in 1969, (b) showing the lack of change in the pleural thickening on the right.

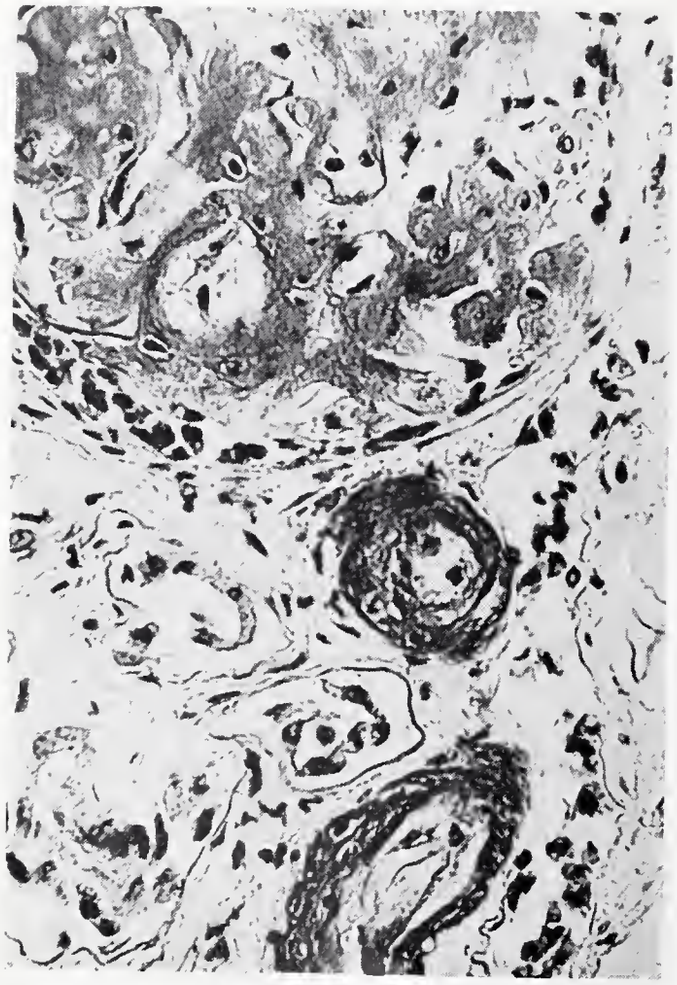
right thoracoplasty and the right lung was dull to percussion posteriorly. Bronchial breath sounds were heard in the right posterior lung fields. The left chest was normal. An ill-defined mass was palpable in the right upper quadrant which was soft and tender to palpation. The spleen and kidneys were not palpable.

Initial laboratory studies showed hematocrit 33%, WBC 11,200 with 89% neutrophiles, BUN 123 mg%, fasting blood sugar 120 mg%, bilirubin 0.2 mg%, alkaline phosphatase 1.71, and BSP excretion of 6%. A sputum smear was negative for acid fast bacilli.

The initial impressions were hydrops of the gall bladder or an unknown malignancy metastatic to the liver. Oral cholecystogram, barium enema and upper gastrointestinal series revealed no evidence of malignancy, however there was a suggestion of an ulcer crater in the duodenum.

By the 17th hospital day, the BUN had risen to 270 mg% with a CO_2 content of 6 mEq/l. The impression at this time was chronic renal failure due to urethral obstruction with urinary tract infection. Peritoneal dialysis was begun on the 18th hospital day. Post dialysis the BUN fell to 50 mg% with a potassium of 2.5 mEq/l and potassium replacement was begun. The patient developed bronchopneumonia which was treated with lincomycin. On the 21st hospital day, the patient experienced two grand mal seizures. Cardiac arrest occurred after the second seizure and resuscitation was to no avail.

Figure 2



Photomicrograph of a glomerulus and arterioles showing amyloid deposition. Congo Red Stain X450.

At autopsy an extensive loculated empyema was found in the right lung with dense pleural adhesions present. The cavity was filled with a thick "cheesy" material which on direct smear showed acid fast bacilli. Culture of this material revealed M. tuberculosis. The kidneys were pale, firm to palpation, and heavy, almost twice normal size, and weighed 270 and 280 grams right and left respectively. Because of suspicion of amyloidosis the fresh tissues were stained with Lugol's Solution with a positive response for amyloid obtained in the kidneys. The spleen was also firm and enlarged, weighing 340 grams. The liver weighed 2050 grams and was somewhat firm to palpation. Microscopic examination showed extensive amyloid infiltration of the kidneys, spleen and adrenals to a lesser degree. In the kidneys the most striking deposition of amyloid was in the glomeruli (Fig. 2). The walls of blood vessels in almost every organ showed infiltration with amyloid (Fig. 3).

This pattern of organ involvement with amyloid is typical of secondary amyloidosis. It is associated with a number of conditions characterized by long standing tissue breakdown such as tuberculosis, leprosy, rheumatoid arthritis, chronic osteomyelitis, bronchiectasis, lung abscess and advanced cancer (Ref. 1). On hematoxylin and eosin sections the amyloid appears as a smudgy eosinophilic material which is deposited extracellularly. Amyloid also stains a rusty orange color with congo red and with crystal violet stains a violet color against a blue background. When sections stained with congo red are viewed under polarized light the amyloid exhibits a characteristic apple-green birefringence (Ref. 2).

Two important points can be made in respect to this case. The first is that when a tuberculosis effusion becomes loculated or walled off by fibrous tissue, the tubercle bacillus may remain alive for many years. The chest lesion can be stable radiographically and since no acid fast bacilli are present in the sputum, the patient is

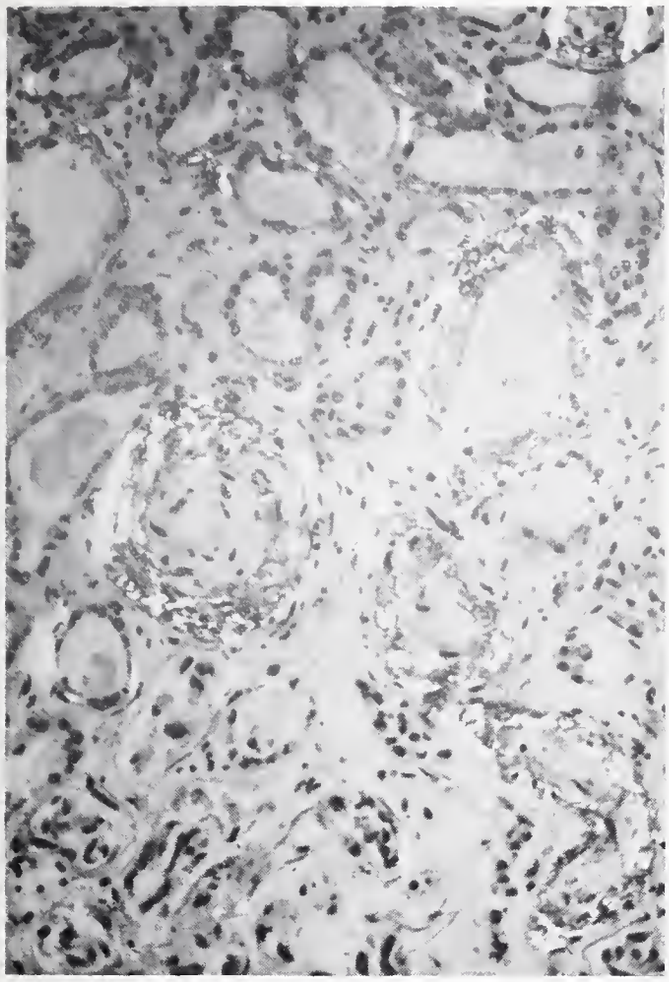


Figure 3
Photomicrograph of renal arterioles with amyloid deposition showing characteristic birefringence under partially polarized light. Congo Red Stain X450.

considered to be in an inactive state or even cured. The second point is that in the face of chronic renal failure, amyloidosis should be ruled out, especially when a predisposing condition is present. The diagnosis can be made antemortem by needle biopsy of the liver or kidney and occasionally by biopsy of the rectal or buccal mucosa (Ref. 3). It is important to establish the diagnosis as soon as possible because, although no definitive therapy is available, medical treatment of the early signs of renal failure can significantly increase longevity.

The importance of the antemortem diagnosis of amyloidosis is emphasized by the recent report by Lowenstein and Gallo (New England Journal of Medicine 282:128-132, 1970) of two cases of histologically proven amyloidosis in which treatment of the underlying infectuous process produced an improvement in the nephrotic syndrome which was present.

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Prosthetic Cardiac Valves and Bacterial Endocarditis

D. A. Killen et al (Vanderbilt Univ Medical Center, Nashville, Tenn)
Ann Thorac Surg 9:238-247 (March) 1970

During a seven-year period, five patients with bacterial endocarditis that had been treated for less than one month underwent emergency aortic valve replacement. In each instance, prosthetic valvular insertion was performed because of progressive hemodynamic deterioration. The two survivors are apparently cured of their endocarditis and are living and well 16 months and 2 years, respectively, following insertion of the prosthesis. During this same seven-year period, endocarditis occurred following the implantation of a valvular prosthesis in 11 patients who did not have active endocarditis at the time of valvular implantation. In three patients cure of the endocarditis was effected by prolonged antibiotic therapy; the patients are living and well up to 3½ years following implantation of the prosthesis. Surgical intervention became necessary in three instances because the prosthesis became detached and in two instances because obstruction developed across the infected valve prosthesis. Two patients survived replacement and are apparently cured.

Acute Encephalopathy With Fatty Change of Viscera (Reye's Syndrome)

J. H. Bornhofen, M.D., E. Hankins, III, and C. Araoz, M.D.*

Introduction

During early 1969 five children were seen by the staff of the University of Arkansas Medical Center with the diagnosis of acute toxic encephalopathy. Four of the five showed signs of liver involvement suggestive of Reye's syndrome (acute toxic encephalopathy with fatty degeneration of the viscera).[1] Inasmuch as a number of cases of Reye's syndrome have been noted throughout the United States and especially in neighboring states since 1965,[2,3] but none has been reported to have occurred in Arkansas, we herein present our recent experience with this condition.

Sample Case History
Case No. 4, UAMC No. 30-45-62

This 5¾-year-old white female was well until six days prior to admission when she developed cough and fever. Her mother and an eight-year-old sister had had a similar illness the previous week, and her mother treated the patient with 5 grains of aspirin every four hours. The patient continued her usual activities until three days prior to admission when she awoke around midnight crying, vomited once and returned to sleep. She awoke again about six a.m. nauseated, and continued to vomit throughout the day (a total of four to five times). She was also restless and anorectic. Her physician prescribed polycillin and thorazine suppositories, 25 mg. q6h PRN. Over the next one and one-half days, she received 4½ suppositories. Two evenings prior to admission, the patient was found lying on the bathroom floor, limp and pale. She said she had merely become sleepy and laid down, denying a fall. There were no medications in the bathroom which she might have taken. That night, she complained of epigastric pain and voided frequently. The day prior to admission, it was noted that her eyes rolled back, and she walked as if she had "limber legs." Thorazine intoxication was suspected. Later that day she became completely disoriented, screaming and thrashing about, not recognizing her parents. When she could not be aroused that evening, she was taken to the hospital where she was treated with intravenous fluids, Benadryl and Cortisone. That night after three seizures consisting of tongue biting, stiffness, and opisthotonus lasting 5-6 minutes she was transferred to our hospital. On admission she was restless, semicomatose, but well nourished and appeared her stated age. The temperature was 101.5° rectally, pulse 105 per minute, respiration 38 per minute, blood pressure 100/80 mm. Hg. and weight 35 lbs. The patient was not cyanotic but did exhibit retractions of the interclavicular notch and use of the accessory respiratory muscles. The neck was supple. The liver edge was palpated 2 cm. below the right costal margin. The pupils were dilated and reacted sluggishly to light. Examination of the optic fundi revealed flattening of the physiologic cups and a small perimacular hemorrhage. There was generalized increased extensor tone with occasional extensor spasms. The deep tendon reflexes were symmetrically brisk without clonus, and the Babinski response was present bilaterally. She responded by irritation and withdrawal to painful stimuli.

Laboratory studies revealed 14.1 gm. hemoglobin, 39.5% hematocrit and 11,300 WBC on the peripheral smear with band forms 3%, polys 80%, lymphs 11% and monos 6%. The opening pressure on lumbar puncture was 140 mm. of water. The fluid was clear containing 3 RBCs and 1 WBC/mm^3 with 60 mg% sugar and 38 mg% protein. The corresponding fasting blood sugar was 86 mg%. The BUN was 16 mg%, CO_2 19 mEq/L and Cl 100 mEq/L. The following day the serum Na was 133 mEq/L, K 4.7 mEq/L, CO_2 19 mEq/L and Cl 103 mEq/L. The SGOT at that time was 395 units (normal less than 40) and the blood NH_3 151.5 μg% (normal less than 45). The total serum protein on the ninth hospital day was 5.9 gm%, albumin 3.3 gm%. Cultures of CSF and urine were negative.

Shortly after admission, the child received 14 gms. of 20% Mannitol by rapid intravenous in-

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fusion. This was followed by Dexamethasone, 2 mg. q6h by intravenous push. Polyionic solutions D10E48 were given 600 cc/day. The child was placed on a cooling blanket. After a brief period of observation, a tracheostomy was performed with improvement in the dyspnea. By the third hospital day, the SGOT had decreased to 154 units, the blood NH_3 to 38.1 $\mu g\%$, and there was obvious clinical improvement. The pupils were more reactive to light; there was less extensor muscle rigidity; she was more responsive to painful stimuli and opened her eyes and attempted to talk when her name was called. The Babinski response was absent. Gradual improvement continued. The tracheostomy tube was removed on the seventh hospital day and the child discharged symptom free on the ninth day.

Findings

Clinical data are summarized in Table 1. All patients were females. Their ages ranged from 5-14 years. The dates of onset were between January and April 1969. Two cases (No. 2 and No. 3), both from the Little Rock Air Force Base, Jacksonville, had onsets within three days of each other, although the children were not believed to have had personal contact. Other than these two cases, the patients came from north central and southern Arkansas. Symptoms were present from one to seven days prior to the onset of coma. Except for the progression to vomiting and coma, similar symptoms occurred in other members of the family in four cases (No. 1, 3, 4, 5). One child's (No. 3) symptoms began following immunization for typhoid and smallpox, and her initial symptoms of cough and fever were felt to be a reaction to the immunization. Another child's (No. 5) symptoms began while she was recuperating from chicken pox. In all cases the initial symptoms were followed by the occurrence of repetitive vomiting leading after a variable length of time to delirium and coma. Four of the five had received phenothiazine to control the vomiting, in doses adequate in two cases to make the referring physician concerned with a toxic reaction. In two cases the phenothiazine was combined with trimethobenzamide (Tigan), in two with aspirin and in one with an

TABLE NO. 1

Case and Unit No.	*Age Sex*	*Locale*	*Date Onset*	*Symptoms and Signs*	*Duration Before Coma*	*Prior Treatment*	*Laboratory Findings*	*Outcome Post Onset*
1 30-17-15	14 yr. Fem.	Bald Knob	1/23/69	Lethargy Vomiting Delirium Coma	3 days	Injection to quiet	(Terminal) Blood sugar 513 mg%	Fatal
2 A78-69	10 yr. Fem.	L.R.A.F.B. Jacksonville	3/12/69	Fever Vomiting Delirium Coma	1 day	Phenergan Compazine Tigan	(DOA)	Fatal 3 days
3 30-30-33	9 yr. Fem.	L.R.A.F.B. Jacksonville	3/15/69	Immunization Fever Cough Vomiting Delirium Convulsions Coma	7 days	ASA Cough syrup Thorazine Tigan	F.B.S. 32 mg% SGOT 140 units SGPT > 128 units NH_3 158.6 mg.	Fatal 13 days
4 30-45-62	5 yr. Fem.	El Dorado	3/31/69	Fever Cough Vomiting Delirium Convulsions Coma	5 days	Anti-nausea Suppositories Antibiotics	F.B.S. 86 mg% SGOT 395 units NH_3 151.5 μg	Survived
5 SVI No. 63-11-69	6 yr. Fem.	Little Rock	4/20/69	Cicken Pox Lethargy Vomiting Coma	5 days	Anti-nausea Suppositories ASA	F.B.S. 67 mg% SGOT 96 units NH_3 37.5μg	Fatal 7 days

antibiotic. The children had otherwise been in good health. Other than the case of concurrent chicken pox, three (No. 1, 3, 4) had had chicken pox in the past and two (No. 1, 3) had had mumps and "measles." Immunizations were complete in all children and indeed one (No. 3) had been immunized as noted above.

Pertinent physical findings upon admission included the healing lesions of chicken pox in one and clinically significant hepatomegaly in only one. One child had expired shortly before arriving in the Emergency Room and another child arrived terminal with fixed dilated pupils and absent deep tendon reflexes. Otherwise the most striking finding was the coma. The other three patients were stuporous on admission. Their coma gradually deepened with loss of gag reflex and decreasing response to painful stimuli. The neck was supple and there were no localizing neurological signs. Frank papilledema was not present although it was occasionally felt that the retinal vessels appeared engorged. Generalized or multifocal tonic-clonic seizures occurred before and during hospitalization in two cases (No. 3, 4) and once begun were difficult to control. Fever to 102-103° rectally requiring a cooling blanket was present in all three non-terminal cases (No. 3, 4, 5).

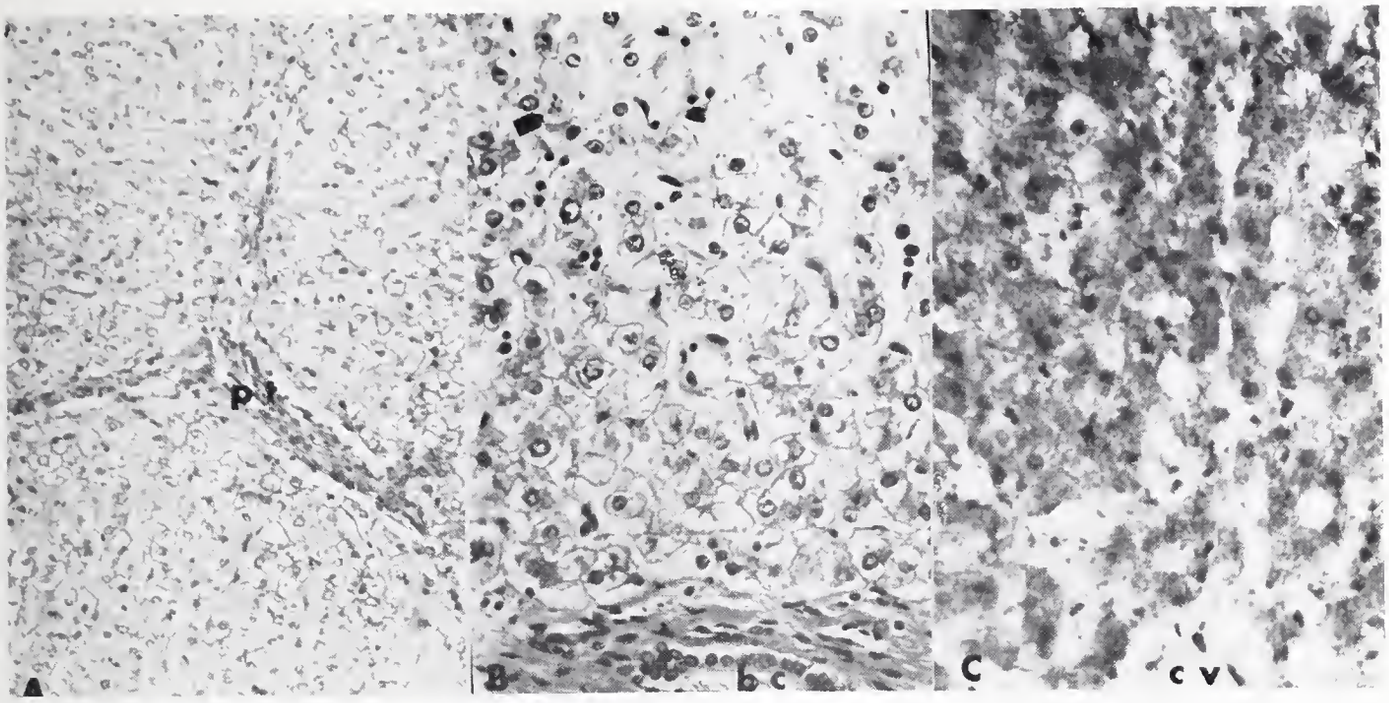
None of the children was anemic and only in the case of the chicken pox was there a mild leukocytosis of 13,650/mm^3 with a normal differential. One child was noted to have 18-24 WBCs/HPF in her urine before insertion of the indwelling catheter. The cerebrospinal fluid opening pressure was elevated in one case (No. 1). Examination of the cerebrospinal fluid for cells, protein and sugar was normal except again in Case No. 1 where 178 RBCs were noted. All cerebrospinal fluid, blood and urine cultures were sterile. Serum electrolytes and blood urea nitrogen were within normal limits. One child had an initial fasting blood sugar of 67 mg%; all others on repeated occasions were normal or above normal while receiving 10% glucose intravenous fluids. The SGOT was significantly elevated in two of three patients tested. Other tests of liver function were normal in the single case tested. A single blood salycilate level did not suggest toxic level. The $FeCl_3$ test on the urine for phenothiazines was negative when performed.

Virological reports are available on three of the children revealing only an infection at some undetermined time with Parainfluneza B in case 4 (Table 2). Another child had clinical and pathological evidence of chicken pox. Findings common to all autopsy cases were fatty metamorphosis of the viscera and cerebral edema. The livers appeared yellow-brown and weighed 100-200 gms. more than normal for children of a corresponding age. The hepatocytes were distended by vacuoles with histochemical characteristics of neutral lipids (Figures 1a, 1c). Similar though less severe fatty changes were also present in myocardial fibers and renal tubular epithelial cells. A few hepatocytes had nuclear pyknosis, karyorrhexis and other nuclear abnormalities indicating irreversible degeneration (Figure 1b). We realize that fatty metamorphosis is a reversible form of cellular degeneration and that the nuclear changes may represent autolysis. Only the brain of patient No. 3 did not clearly exceed the normal weight for the age.

TABLE NO. 2

Patient	*Virological Studies*	*Autopsy Findings*
No. 1	No report of specimen submitted for these studies.	No autopsy.
No. 2	No specimen was obtained for these studies.	Brain weighed 1550 g (normal 1200-1350 g). Herniation of cerebellar tonsils. Fatty change of liver and proximal tubules of kidneys. Focal atelectasis.
No. 3	Cultures of brain, spinal cord, lungs, liver and kidney were negative.	Brain weighed 1350 g (normal 1270-1350 g). Fatty change of liver. Hydropic degeneration of renal tubules. Tracheostomy. Atelectasis and alveolar hemorrhages.
No. 4	Serological studies suggested infection at some undetermined time with Parainfluenza Type B.	Survived.
No. 5	No speciment was obtained for these studies.	Brain weighed 1450 g (normal 1180-1250). Fatty change and enlarged liver weighing 800 g (normal 650 g). Bronchopneumonia. Vesicles and pustules of varicella.

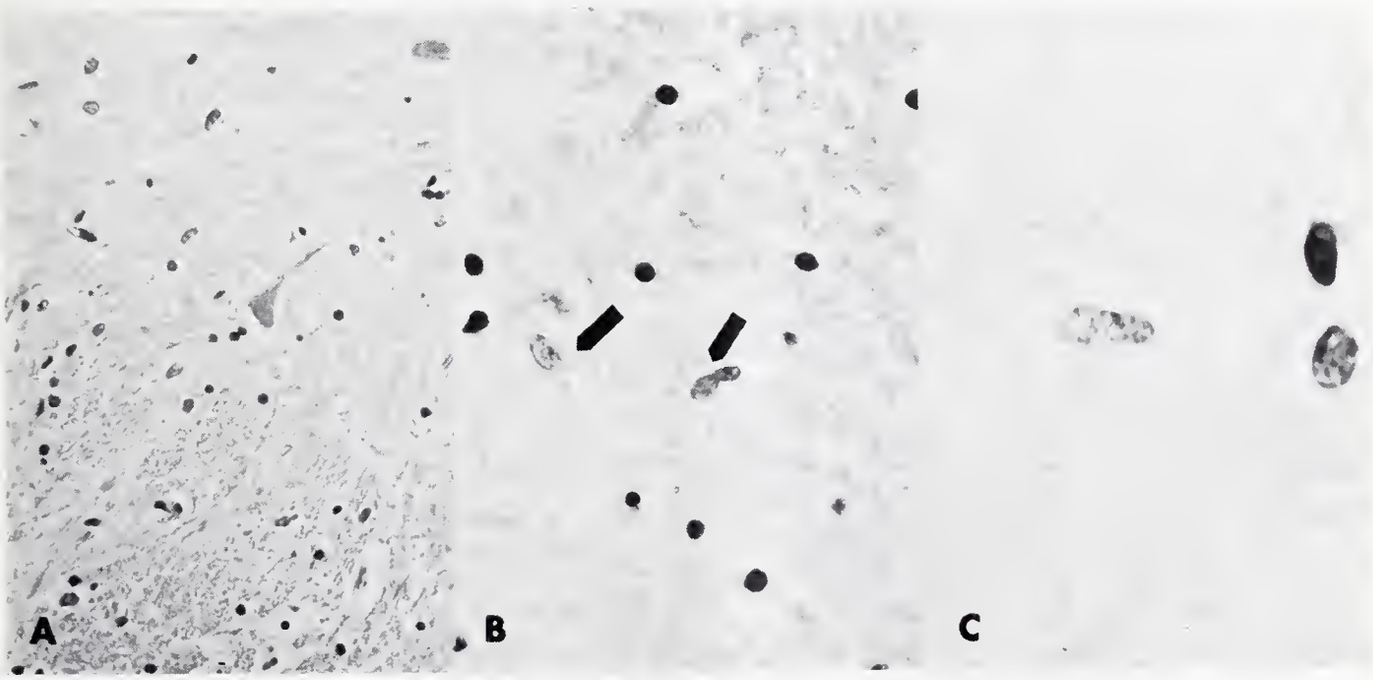
Figure 1



Liver. p.t.: portal triad, b.c.: bile canaliculus, c.v.: central vein. All photographs are enlargements x 2 of the negatives. A, case 3, three hepatic lobules around p.t. Hepatocytes have clear vacuoles, H and E, mag. x 160. B, case 5, vacuolization of cytoplasm and pyknosis (arrow), H and E, mag. x 320. C, case 2, Oil red O stain, in frozen section. Lipids are dark gray or black. Mag. x 320.

This child died of respiratory obstruction six days after the onset of coma at a time when her disease was otherwise improving. Patients No. 2 and 5 had brains roughly 200 gms. heavier than normal for their respective ages. Cerebral edema was also evident by flattening of the crests of the gyri, sulcal narrowing, uncal and tonsillar herniation and compression of the ventriculi. Microscopically the cerebral changes were consistent with hepatic encephalopathy,[4,5] astrocytic nuclei metamorphosed from ovoid to large elongated, occasionally lobulated shapes (Figure 2). Other pathological changes were present such as widening of perivascular and perineuronal spaces, neuronal loss, "dark" neurons, capillary congestion and perivascular hemorrhages. These

Figure 2



Brain. All photographs obtained of case 5 and enlarged x 3 from negatives. A: neuronal shrinkage and prominent astrocytic nuclei in the putamen. H and E, mag. x 160. B: elongated astrocytic nuclei with lobulation or indentation of nuclear membrane (arrows). H and E, mag. x 500. C: id. to B. H and E, mag. x 1250.

were interpreted to be effects of anoxia or delayed fixation of the brains.[6] Fat emboli were not found in parenchymal or leptomeningeal vessels.[7] Nor was there any evidence of inflammation, parasites or inclusion bodies.

Treatment

We believe that with prompt aggressive medical management, the survival rate in this condition can be increased.[8] The following steps are recommended:

1. Combat cerebral edema with the combined use of:
   a. Mannitol, 20% water, 0.5 gm/kg intravenous push over 10-15 minutes.
   b. Dexamethasone ½ mg/kg/day or 10 mg/M²/day intravenously in divided doses for 3-5 days.
   c. Intravenous fluids limited to maintenance amounts of 40-50 cc/kg/day or 1000 1200 cc/M² day.
2. Maintain an adequate airway using either:
   a. Tracheostomy or polyvinyl endotracheal tube with
   b. Frequent monitoring of blood gases when available.
3. Interruption and prevention of convulsions using:
   a. Valium 2½-10 mg. by slow intravenous push for seizures and every 4-6 hours prophylactically.
   b. Dilantin 5 mg/kg/day intravenously for prophylaxis.
4. Monitor for evidence of Reye's syndrome:
   a. Serial SGOT, SGPT blood ammonia.
   b. 10% glucose intravenous fluid prophylactically.
   c. For hypoglycemia, 25% glucose by intravenous push.
5. External body cooling for pyrexia.

On the basis of consistent cerebral edema seen at autopsy in fatal cases, cerebral diuretics are given early even in the absence of papilledema. Intravenous fluids are administered in maintenance amounts only for adequate urinary output. Presumably due to a combination of the cerebral edema and hypoxia, respiratory arrest may occur suddenly and unexpectedly unless blood gases are frequently determined. We therefore feel that maintenance of an airway is of extreme importance. All of our patients received a tracheostomy although we realize that the newer polyvinyl endotracheal tubes may be just as satisfactory and may be tolerated for up to 4 days. We have found parental Valium very effective in interrupting the common epileptic status without depressing respirations. Dilantin intravenously is then started as a prophylaxis for recurrent seizures. The blood sugar is determined every six hours. Hypoglycemia when detected is treated with 25% glucose intravenously. Otherwise 10% glucose intravenous solutions are administered as above. Because of the frequent suspicion of salicylate intoxication, elevated temperature is controlled with the cooling blanket. Other measures for the care of the comatose patients, such as O_2, frequent turning and good nursing technique are utilized.

Comments

A number of excellent reviews of Reye's syndrome have appeared in the recent literature, and the interested reader is referred to these for more complete information.[9,10,11,12,13,14] The clinical picture is one of rapid progression from a seemingly benign childhood illness to high fever, vomiting and delirium followed by coma and convulsions. Unless prompt medical management is instituted, death usually occurs due to respiratory arrest. With adequate treatment, recovery is complete after 3-7 days. At autopsy the only consistent findings are cerebral edema and, if associated with Reye's syndrome, fatty infiltration of the liver and kidneys.

Although the etiology of acute toxic encephalopathy and its complicating picture of Reye's syndrome are poorly understood, their limitation to the pediatric age range has caused at the least the former to be compared to febrile convulsions and febrile delirium.[6] We believe that efforts should be continued to establish an etiology for this baffling condition.[12] A toxic reaction is suggested by the frequent administration of drugs to control the vomiting and/or the fever. An infectious etiology is suggested by the frequent history of a preceding illness. The concentration of pheonthiazine can be roughly estimated by the depth of blue color of the urine upon the addition of a few drops of acidified 10% ferric chloride. Blood salycilate levels can be determined with the well known ferric nitrate method available in most hospital laboratories. Specimens for virus identification may be sent to the Division of Laboratories of the Arkansas Health Department, 4815 West Markham Street, Little Rock 72201. Virus requisition forms are obtained from the County Health Department or the Public Health Nurse. A brief history is re-

quested. Acute and convalescent blood serum or unfrozen clotted blood drawn at 10-14 day intervals is sent in well sealed sterile test tubes. Fresh frozen stool, necessary when either Coxsackie or ECHO organisms are suspected, may be sent in a styrofoam container packed in dry ice.

ACKNOWLEDGMENTS

1. Drs. A. R. Rozzell, C. C. Welch, and E. Palacios performed the three autopsies. Case No. 5 was a patient of Dr. Lloyd Warford.
2. Mrs. M. Moseley and Miss M. N. Hall prepared the histologic sections.
3. Mrs. K. Williams compiled and typed the manuscript.

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Thrombolytic Treatment of Nonacute Arterial Occlusions

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Deutsch Med Wschr 95:610-615 (March 20) 1970

Intravenous streptokinase infusions were administered to 35 patients with a total of 66 nonacute arterial occlusions. Treatment was successful in 23 of the 66 occlusive episodes. Eighteen of 27 were one to six weeks old and five of 19 were 6 to 26 weeks after the occlusion. No success was achieved in ten instances in which the occlusion had occurred six months or more previously. The site of occlusion in the six successfully treated after 6 to 26 weeks were the iliac artery (seven of seven), femoral artery (7 of 12), and popliteal artery (four of eight). Measured by venous-occlusion plethysmography, peripheral circulation after successful thrombolytic treatment was similar to that seen after surgical arterial reconstruction. Improvement of perfusion has so far lasted up to 2½ years, but has required anticoagulation.

Neurovascular Compression Syndromes Considerations in the Selection of Patients For Surgical Correction

James T. Parsons, M.D.*

The medical literature is replete with numerous publications alluding to several clinical syndromes involving the neurovascular structures of the thoracic outlet.[10] This perhaps represents one of the most controversial subjects in the surgical literature with conflicting opinions regarding the name, pathogenesis and methods of management. Various descriptive terms have been proposed and applied to these syndromes depending upon the author's concept of the etiology. Such names as scalenus anticus syndrome, costoclavicular syndrome, hyperabduction phenomena, thoracic outlet syndrome, costodorsal syndrome and others have been published.[2] Perhaps it would be best to group and classify these disorders under the term, "neurovascular compression syndromes," because it attempts to illustrate a more descriptive picture of the problem that has evolved during the past decade. It appears that there are a number of related anatomical mechanisms that come into play to produce the same clinical symptoms in different patients by causing compression of the neurovascular bundle to the upper extremity. It now appears that even though there may be a number of mechanisms involved in neurovascular compression of the thoracic outlet, the denominator common to all causes of neurovascular compression appears to be a cervical or first rib or associated first rib abnormalities.[9]

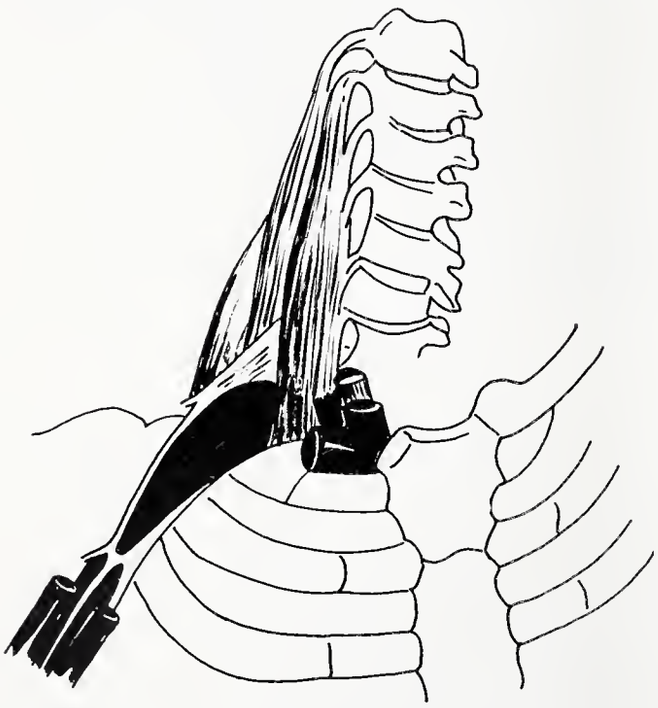

Figure 1

Compression of the brachial plexus and subclavian artery due to hypertrophy of the scalene muscles without a cervical rib was reported by Ochsner and DeBakey. Referred to as the Scalenus Anticus Syndrome.

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Anatomy

The thoracic outlet is a descrete anatomical space that serves the purpose of conveying the neurovascular bundle from the cervical mediastinum to the upper extremity, namely the brachial plexus, the subclavian artery and the subclavian-axillary vein. It is also the functional anatomy of the thoracic outlet in cooperating with the muscles of the shoulder girdle that enables the upper extremity a wide range of motion in multiple planes. The subclavian artery exists from the cervical mediastinum by arching over the first rib behind the scalenus anticus muscle, in front of the scalenus medius muscle. It then passes under the clavicle and enters the axilla beneath the pectoralis minor muscles and beneath the coracoid process of the scapula. The subclavian vein has an identical course except it passes anterior to the scalenus anterior muscle. The brachial plexus follows the same route as the subclavian artery but lies a little more posterior and lateral.

Potential Compression Sites

The most important factor in the production of these compression syndromes is the naturally occurring narrow rigid spaces through which the neurovascular bundle must traverse from the cervical mediastinum to the axilla. At each of these anatomical sites some abnormal structure variation may decrease the function by com-

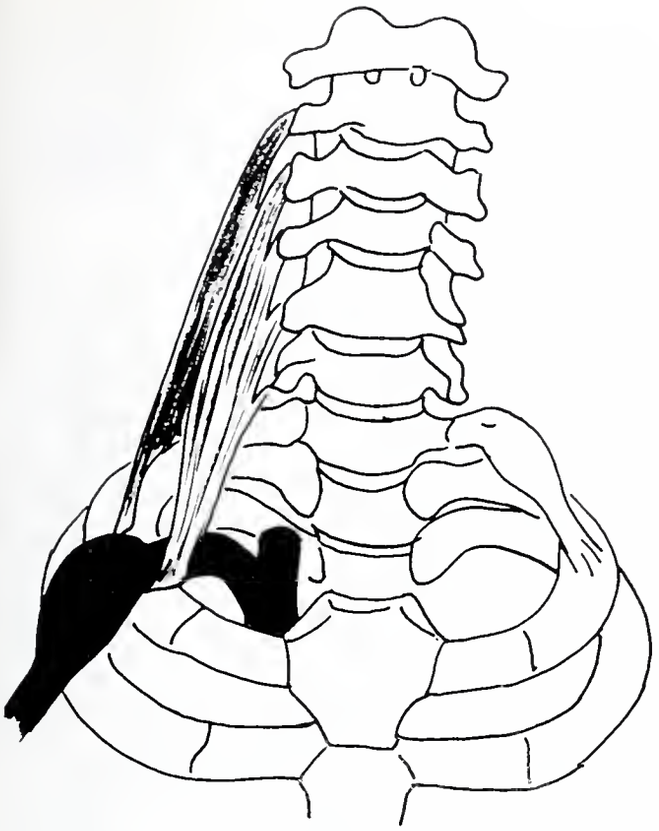


Figure 2

Compression of the subclavian artery with poststenotic dilatation and aneurysmal formation due to a cervical rib and dense fibrous bands.

pressing on the nerves and accompanying vessels. These are (1) the interscalene triangle, bounded by the anterior scalenus and scalenus medius muscle and the first rib which lies inferior. (2) The costoclavicular triangle is a space bounded by the inner third of the clavicle, the anterior and middle third of the first rib and the superior border of the scapula. (3) The subcoracoid triangle is again another space. It is bounded superiorly by the coracoid process, anteriorly by the tendon of the pectoralis major muscle and posteriorly by the costocoracoid fascia and first rib. Fortunately, most patients are so constructed that the neurovascular bundle has adequate passage through these spaces without compression. However, it is difficult to explain why some individuals will exhibit severe neurovascular compression phenomena while others will not with or without anatomical abnormalities such as a cervical rib, fibrous attachments or hypertrophy of the muscles involved. It appears that there are multiple factors involved, not only in the structural anatomy of the thoracic outlet, but also in the way certain individuals can compensate or adjust their posture in order to relieve compression on a neurovascular bundle. In advance, neurovascular compression of the thoracic outlet syndromes unresponsive to conservative physical therapy, traction collars or even scaleniotomies, excellent results are now obtained by resection of the first rib. The solution to the problem of thoracic outlet compression is based on the rational that a first rib resection to relieve neurovascular compression as these structures enter or exit over the first rib which forms the boundary of the above triangles.

Cervical Rib

Of the three most important congenital abnormalities associated with neurovascular compression, the most important is the cervical rib.[11] It is the most common and has the greatest historical interest. Cervical rib was reputed to be known by Galen and Versalius in the fourteenth century. The condition is noted to be bilateral in approximately 80% of the cases. The incidence of cervical rib formation is said to be between 0.5 and 1.0 percent of individuals. In the unilateral minority they are more common on the left, 65%; yet when symptoms develop there are usually right-sided in right-handed individuals. The symptoms are twice as frequent in females as in males and usually are not apparent before the late twenties and early thirties. These factors suggest contributing mechanisms in addition to anatomical abnormalities. Evidence has incriminated other factors related to poor posture and the progressive depression of the shoulder girdle most commonly seen in females. Cervical ribs in women are found to be more prominent and fully developed than those in men and therefore more apt to produce symptoms. Contributing factors in both sexes appear to be progressive ossification of the skeleton and associated loss of mobility. In general cervical ribs and fibrous bands cause compression of the subclavian artery and brachial plexus by narrowing the interscalene triangle.

The Symptomatology of Cervical Ribs

It is difficult to determine the actual incidence of symptoms attributed to cervical rib formation. Only in an undetermined small percentage are there associated significant clinical symptoms. The clinical spectrum may be manifest chiefly as neurological or vascular symptoms or a combination of both.

The vascular effects of cervical ribs may be directly from local pressure or reflex spasm in which the rib may not necessarily impinge on the artery.[5,8,11] The clinical symptoms are quite

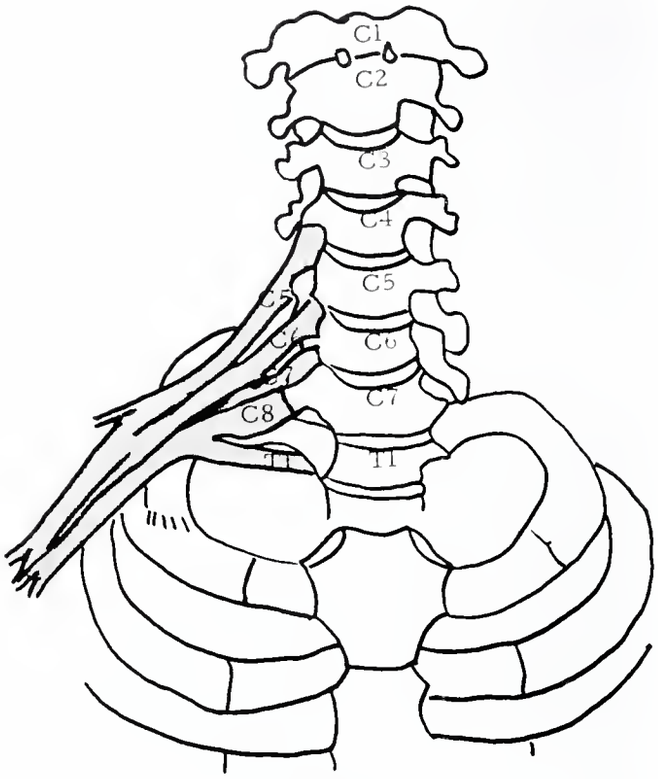


Figure 3

Elevation of the lowest cord of the brachial plexus causing irritation of the component nerve fibers by a cervical rib. In addition, insertion of a middle scalene muscle may cause compression on the brachial plexus and symptoms.

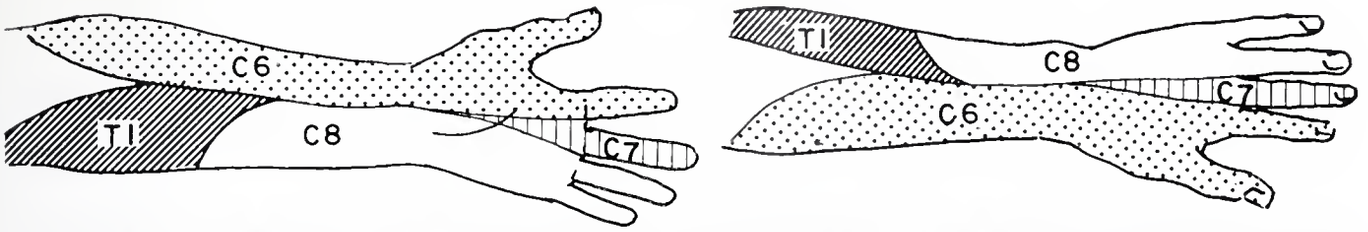
variable but usually begin with a sensation of heaviness and fatigue in the involved arm and hand. This is subsequently followed after some time by intermittent pain brought on by change in posture or through the occupational use of the extremity. Direct vascular syndromes may be the initial complaint in a young individual, at which time coldness, cyanosis and claudication may be present. The symptoms of parasthesia, numbness and tingling are common to both vascular and neurological compression of varying degrees. Some degrees of arterial insufficiency may be evident with infection and ulceration. The cervical rib syndrome is not uncommon in telephone switchboard operators or store clerks who have to reach to various high levels. The pain due to cervical rib may occur anywhere in the upper extremity, from the hand to the shoulders. It usually begins in the supraclavicular or deltoid region and radiates to the ulna or median nerve distribution in the hand. It may, however, originate in the hand or remain localized there. The site of pain depends upon the portion of the brachial plexus being irritated by the cervical rib itself or by fibrous bands attached to it. Later in the course of the disease there may be objective loss of sensation in the hand or arm with muscle weakness and muscle atrophy. Occasionally patients may complain of headaches or pain in the neck. Patients will not infrequently relate a history that symptoms are relieved by change in posture, rest and elevation of the extremities.

Vasospastic Symptoms

Vasoconstrictive phenomena similar to those of Raynaud's disease may be seen in the occasional case of neurovascular compression.[2,7,10] At first these vascular disturbances were thought to represent a simple mechanical compression of the subclavian vessels. As time passed however, it became apparent that factors other than mechanical compression of the subclavian artery were present in certain individuals in which patients would exhibit vasoconstrictive phenomenon. These vasopastic disturbances usually involved only one or two digits. However, the entire hand may be involved in the severe case with ulceration on the distal phalanx. These vasoconstrictive disturbances may be so severe and may occur so frequently that it produces complete disability. Initially the vascular symptoms may consist of intermittent attacks of coldness and pallor of the skin involving only one or two digits. However, as the symptoms progress, permanent coldness, cyanosis or pallor of one or more fingers is not unusually seen. Diminution in the volume of the arterial pulse is common and the occasional case of arterial thrombosis and occlusion have been reported. In these cases gangrene of one or more fingers have been noted with major amputation in 80% of the cases. A normally pulsating subclavian artery has been associated with occlusion of the axillary, brachial, radial or ulna artery in patients with cervical rib compression. These lesions presumably occur because of embolic occlusion resulting from partial thrombosis of the compressed subclavian artery.[8] The thromboembolic phenomena may originate also in the poststenotic dilated subclavian aneurysm.

A systolic bruit may be heard or a thrill palpated in the medial portion of the supraclavicular space when the subclavian artery is partially compressed by the cervical rib with aneurysmal formation. This bruit is noted most frequently in such cases on performance of the Adson or Scalene maneuvers. Occasionally large cervical ribs may be palpable in the medial portion of the supraclavicular space, particularly if the cervical rib is complete and joins the first rib

Figure 3a



The sensorimotor distribution of C8, T1 is primarily ulnar nerve. The fibers of C7 are sensory to the middle finger and radial aspect of the dorsum of the hand. The motor distribution of C7 is to the muscles of extension (radial nerve) of the elbow, wrist, thumb and metacarpophalangeal joints. The sensorimotor distribution of C6 is along the lateral aspect of the forearm.

by either a true articulation or dense fibrous band. In the occasional patient with acute vascular insufficiency due to a cervical rib or scalenus anticus syndrome, it is imperative that definitive therapy be employed with relief of the obstruction and arterial flow to the extremity.[2,4]

Differential Diagnosis

It is important to decide which mechanical factor is at fault in the differential diagnosis of the neurovascular compression patients. It is also equally necessary to differentiate certain other lesions which cause pain, paresthesias and vascular symptoms in the upper extremity.

First, it is important to ascertain the effects of the patient's symptoms secondary to direct or indirect trauma. A recent or past history of the traumatic episode and correlating this with the physical findings will be helpful in clarifying the proper diagnosis. Bicepital tendinitis presents as local tenderness in the bicepital grove with pain or active contraction of the biceps muscle. Traumatic tears of the rotator cuff can be diagnosed on active rotation of the shoulder.

Neurologic causes of pain in the upper extremity are more difficult to recognize than local causes of neurological pain in this region is attributed to a herniated cervical disk. Cervical disks usually occur at the interspace between the fifth and sixth or sixth and seventh cervical vertebra and produced characteristic neurological symptoms. Paresthesias with numbness in the fingers may be present. Initially, varying degrees of pain begin to radiate along the medial border of the scapula into the arm, occasionally into the anterior chest and later down the lateral aspects of the arms into the fingers. The subtle nature of pain distribution is characteristic in that compression of C6 causes pain and numbness primarily in the thumb and to a less degree in the index finger. Occasionally the biceps

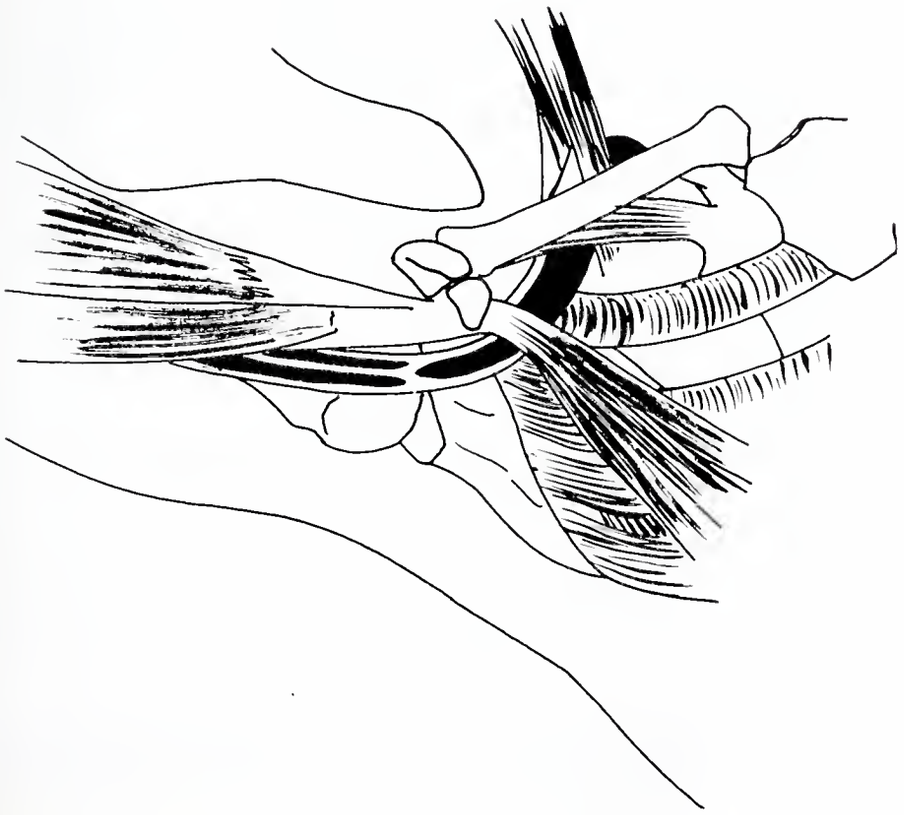
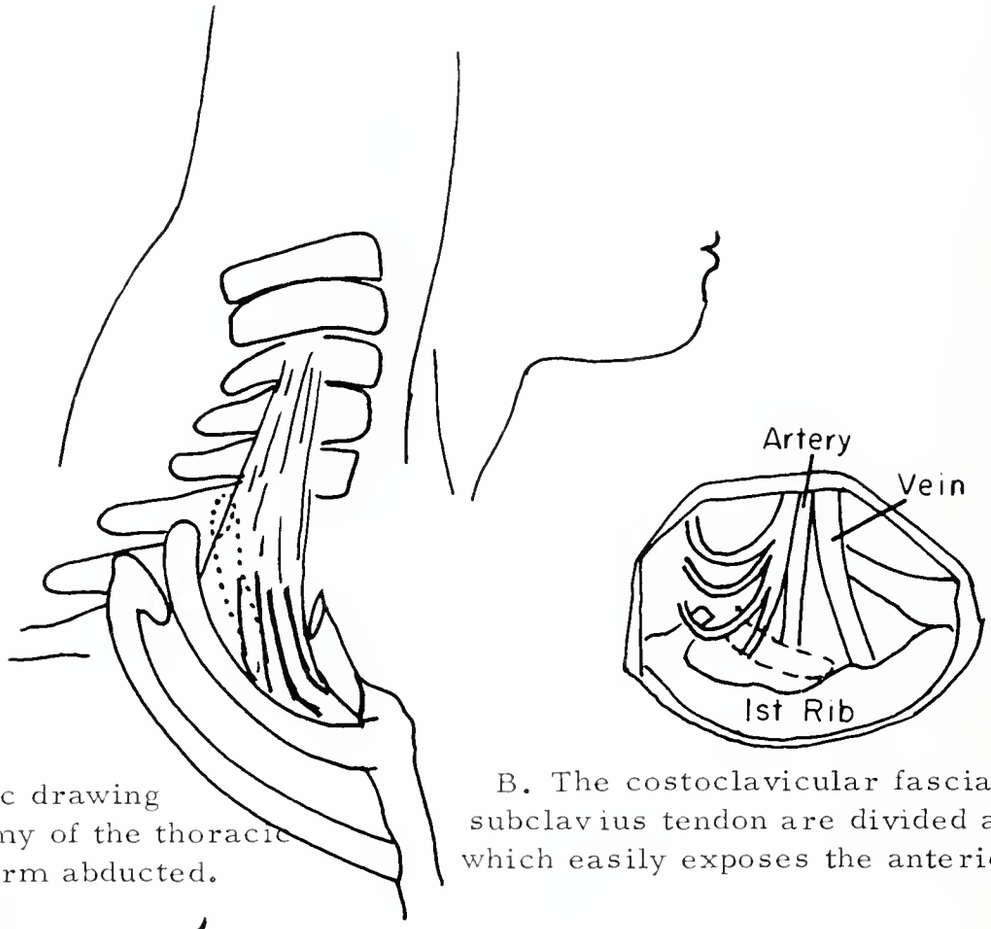


Figure 4

When the arm is forcefully abducted 90° to 120° and externally rotated, compression of the brachial plexus and subclavian artery between the clavicle and first rib is readily apparent in some individuals. Any injury or fracture of the clavicle may so narrow this triangle as to produce compression of these structures, simulating neurovascular compression of the thoracic outlet.

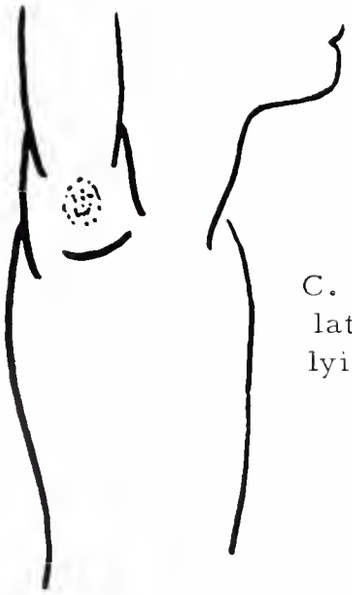
muscle is weak and its reflex is reduced or abolished. Compression of C7 produces pain in the index finger and middle finger while the triceps muscle is weak and its reflex may be abolished. Rarely does pain and paresthesia in the ulna distribution is found to be related to herniations between C7 and T1 veterbra causing compression of nerve root C8.

The diagnosis of a ruptured cervical disk can primarily be made on the bases of the history, X-ray findings and the physical diagnosis. One of the most common causes of paresthesias and pain in the upper extremity is the carpal tunnel syndrome. There is often an occupational history associated with the carpal tunnel syndrome in which there is active use of the hand such as hammering, sawing or which an instrument is held. Flexion or extension of the wrist for



A. Schematic drawing of the anatomy of the thoracic outlet with arm abducted.

B. The costoclavicular fascia and subclavius tendon are divided anteriorly which easily exposes the anterior region.



C. Position of the skin incision between latissimus dorsi and pectoralis major muscles lying just anterior and below the axillary hair line.

Figure 5

Anterior axillary approach for cervical or first rib resection can be most easily performed with the patient in the anterio-lateral position and the arm hyperabducted by an assistant. The scalenus anterior and medius muscles are divided at their insertion on the first rib, the periosteum is then incised, the costoclavicular fascia along with the subclavius tendon is divided and the first rib removed.

several minutes at a time may produce the symptoms. The neurological deficit is usually confined to the distribution of the median nerve, although pain may be felt in the entire hand, forearm and occasionally referred in the arm and shoulder. Weakness of the muscles innervated by the medial nerve distal to the wrist may be noted. This is most pronounced in the muscles of the thumb. Occasionally vascular insufficiency with the Raynaud's phenomenon may be associated with the carpal tunnel syndrome, however, in general vascular symptoms are otherwise absent.

Superior sulcus tumors more commonly known as Pancost's tumor must be differentiated as a causative factor in the differential diagnosis of patients with pain in the shoulder or arm.

Technique for Cervical or First Rib Removal

At the present time there are several techniques a surgeon may use in resecting a cervical or first rib.[2,10] Earlier reports of cervical rib resection describe either the anterior—supraclavicular approach or the posterior—parascapula approach.[3] These approaches have limitation in both exposure and safety and are complicated and traumatic. Probably the safest approach and easiest as far as technique is concerned is resection through the axilla.[9] The technique of resection either the first rib or the cervical rib through the axillary approach is somewhat new and will be described in detail.

The patient is placed in a 45 degree posterior lateral position with the arm elevated, abducted and flex at the elbow. Support of this patient is accomplished with towels or sandbags along the spine. The entire axilla shoulder and half of the chest and back are prepared and drapes applied for axillary exposure, the arm is draped with two layers of stockinet so that an assistant may maneuver the limb as desired. An incision three to four inches long is made transversely with a slight downward curve along the lower aspect of the axilla below the inferior border of the axillary hair line. The incision is made low in order that it will lie at just the right level when the arm and shoulders are raised and will avoid axillary fat, nodes, and vessels. This is particularly important in a female patient as it allows the patient to shave the axilla without encountering the scar.

The incision is carried through the subcutaneous tissue toward the rib cage directly, the axillary fascia is also incised and the lymph tissue retracted laterally. At this point a subfascial tissue plane is identified and the dissection is carried upward in this plane beneath the axillary fascia directly on the rib cage to expose the cervical rib. Using both sharp and blunt dissection the intercostobrachial—cutaneous nerve may be identified coursing from the second intercostal space to the axilla. Trauma to this particular nerve may cause some paresthesia with numbness in the axilla and dorsum of the forearm but this is only temporary.

At this point of the procedure the first rib along with the cervical rib is identified at which time the assistant raises the arm and the shoulder vertically. By permitting the assistant to elevate the arm, the shoulder opens the axillary window and thoracic outlet exposing the subclavian arthery, vein and brachial plexus along with the cervical rib. At intervals it is necessary to relieve pull on the shoulder girdle muscles and the brachial plexus in order to minimize post operative discomfort. Fascial bands are easily identified coursing between the cervical rib and first rib, compressing the subclavian artery and brachial plexus. Retractors on the tendon of the pectoralis minor and the latissimus dorsi muscle aid in exposure. It is necessary to divide the tendinous attachments of the anterior and middle scalene muscles as they insert on the first rib. At this low level the phrenic nerve is rarely identified. At this point fascial bands between the cervical rib and the first rib are then divided exposing the cervical rib which is then easily removed with rongeur. Chords of the brachial plexus are easily identified and retraction is oftentimes not necessary as this avoids post operative neuritis.

After removal of the cervical rib, the posterior portion is carefully felt for bone spicules which are carefully rongeured until the edge is smooth.

The transaxillary approach can be applied to resection of the first rib in patients exhibiting neurovascular compression of the thoracic outlet. At the close of the procedure the pleura is carefully inspected by direct vision and if opened a small catheter is placed in the pleura cavity and brought out the axilla, and connected to closed water drainage. The subcutaneous fascia of the axilla is sutured and the skin edge is approximated. The catheter is placed in the pleural spaces and then removed. Total blood loss will usually not exceed 100 cc and operative time is around 1 to 1½ hours.

ANALYSIS OF 26 PATIENTS

Women	16	60.4%
Men	10	39.6
Unilateral	24	92.3
Bilateral	2	7.7
Neurologic Symptoms	26	
Vascular Symptoms	9	
Surgical Results		
Relived	24	92.3%
Improved	2	
Failed	0	

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Skin Temperature Changes in Raynaud's Disease After Grisofulvin

C. R. Charles and E. S. Carmick (US Naval Hosp, Philadelphia)

Arch Derm 101:331-336 (March) 1970

Six out of seven patients with Raynaud's disease were benefited by oral administration of grisofulvin. Both subjective and objective improvement was noted following various intervals of treatment with "fine-particle" grisofulvin in dosages of 500 mg or 1,000 mg daily. Objective improvement was measured utilizing continuously recorded digital pad temperatures following one minute exposure of the digit to stirred ice water. The temperature response curves of these patients prior to the start of grisofulvin therapy implied temporary ischemia; following treatment with grisofulvin for two to eight weeks repeated digital temperature response curves to the same stimulus showed marked improvement and, in most instances, approached the mean control curve of temperature measurements in 14 normal control subjects.

3′,5′ Cyclic Adenosine Monophosphate in Depression and Mania

Y. H. Abdulla (Guy's Hosp Medical School, London) and K. Hamadah

Lancet 1:378-381 (Feb 21) 1970

Twenty-four urines collected on one or more occasions in each of 26 women with affective disorders were analyzed for 3′, 5′ cyclic adenosine monophosphate (cyclic AMP). In healthy controls, the 24-hour excretion was 2,282 mμ-mole of cyclic AMP. In 13 cases where an initial depression improved after treatment the mean cyclic AMP excretion rose from 523 to 1,283 mμg mol/-24 hours. In all patients from whom two collections were made the change in cyclic AMP excretion reflected the alteration in the clinical picture—improvement in depression being consistently associated with an increase in cyclic AMP, while the trend was reversed in patients moving away from mania. Intracellular cyclic AMP deficiency is related to depressive illness and a striking increase leads to mania.

ELECTROCARDIOGRAM OF THE MONTH

AGE: 48 SEX: Male BUILD: Slender BLOOD PRESSURE: 110/75

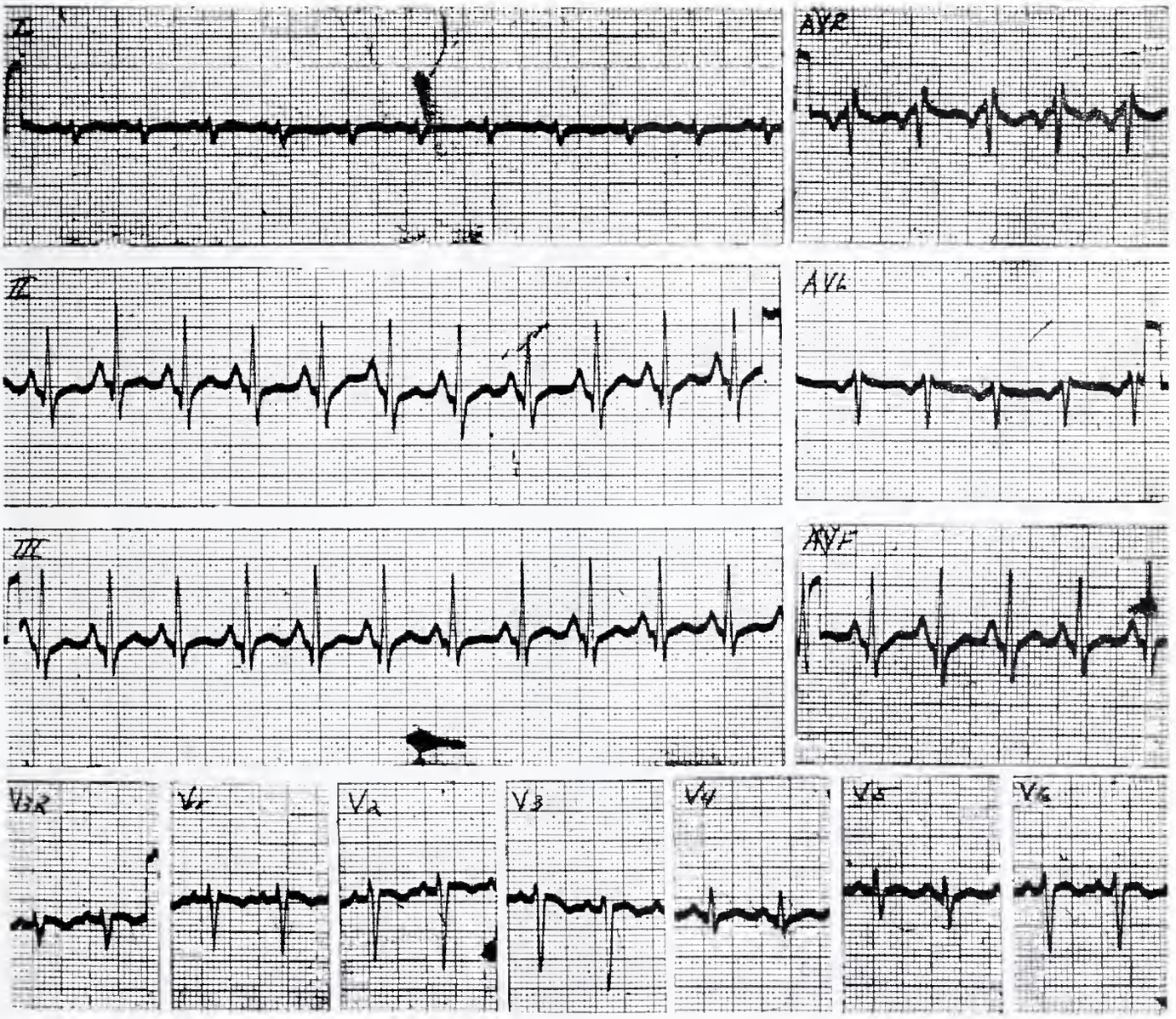
CARDIAC DIAGNOSIS: Cor pulmonale.

OTHER DIAGNOSES: Emphysema.

MEDICATION: Not stated.

HISTORY: No information available.

See Answer on Page 81



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 81

W. C. Williams, M.D.

HISTORY: This 55-year-old white male complained of headaches. He had noted increasing skull size over prior three years.

PUBLIC HEALTH AT A GLANCE

Venereal Disease Program

In 1968, there were 118 cases of primary and secondary syphilis reported to the Division of Communicable Diseases. This was the lowest number reported in over 10 years. This figure also represented the progress of a state and national effort designed to ultimately eliminate syphilis.

However, regretfully, 1969 was a "banner" year, as far as the number of new cases of syphilis were concerned. Two hundred twenty-two cases (more than an 80% increase) were reported during last year. It now appears that we will see additional increases in 1970. In addition, the cases in 1969 represent the first increase over a preceding year since 1964.

"Why have we had increase in new cases of syphilis, after years of decreases?"

First of all, in syphilis control, as in general communicable disease control, epidemiology must interrupt the chain of infection. This is more difficult, obviously, in diseases which are spread from man to man, and especially with syphilis, which is spread by sexual contact.

Members of the staff and other workers of the Arkansas Health team have used the same basic epidemiological methods which were used during those years when the number of people infected with early syphilis declined. Those methods have included the patient interview and contact follow-up process. Epidemiologists, however, report that any communicable disease which has man as both carrier and host, will tend to fluctuate in its incidence.

Perhaps we will experience one of those periodic cyclic increases in infectious syphilis cases and can look forward to a decrease.

Hopefully, this is what will take place. But, because syphilis is a venereal disease and because its successful management involves the complexities of human nature, there are other factors which must also be considered.

One must consider program ability to provide on-the-spot epidemiologic coverage for the entire state. The number of field investigators (those who knock on doors and take blood tests in bars and tenant shacks) is at the lowest level in years. No immediate relief in this area is seen. The four investigators focus their attention on syphilis, and attempt to keep pace with the cases which are occurring.

Because of inadequate personnel levels, the important aspects of the program are shortchanged. It is virtually impossible to provide follow-up service to *all* of those persons reported with a reactive serologic test for syphilis. It is also difficult to keep the private physicians informed of the current venereal disease situation. (This is an area of major concern to us since a survey last year indicated that private physicians reported only about 13% of the infectious cases they were seeing.)

It is also difficult with the small number of men which we have to fulfill all of the laboratory participation needs. These include the goal of obtaining, on a voluntary basis, the name of each person with a reactive serologic test for syphilis from each approved laboratory in Arkansas.

The current trend of the so-called "permissive" society may also be an important factor which is contributing to the increase in the number of persons infected. Some have suggested as another factor, the birth control pill and its availability to unmarried females.

In any case, and for whatever reason, venereal disease is a critical problem of the young. The number of people between the ages of 15 and 24 constitute more than half of the gonorrhea and syphilis cases. There is even a sizable number of persons age 14 and under who are infected with a venereal disease each year.

There is also the continuing problem of gonorrhea, which we cannot ignore in the hope it

will disappear. The number of persons reported to have gonorrhea is usually about 6,000 annually. There is evidence that this is also a grossly under-reported disease. In fact, the situation has become so critical in some areas of Arkansas, that an epidemic could be said to exist.

The relatively short incubation period for gonorrhea and the absence of adequate diagnostic tools make control efforts for gonorrhea almost meaningless. About the most we can do at this time is provide treatment drugs for those persons who are unable to pay.

The future of venereal disease control as it now exists is not clear. The changes in public health patterns and the administration of disease control efforts are being influenced by the concepts of "Comprehensive Health" and may cause, at a very critical time, a decrease in specific efforts in controlling syphilis.

With the reduced number of field investigators, our efforts will continue to be directed to the epidemiology of infectious syphilis. We will continue to provide, as rapidly as possible, the appropriate assistance to the physician when it is requested. We will direct our work to finding those persons with syphilis, and in preventing those exposed to the disease from becoming infectious.

VENEREAL DISEASE IN ARKANSAS
1958-1969
SYPHILIS AND GONORRHEA

Year	*Primary and Secondary*	*Early Latent*	*Other Stages*	*Gonorrhea*
1958	198	326	2,457	4,581
1959	202	383	2,138	7,844
1960	220	157	1,232	8,704
1961	285	123	1,180	7,980
1962	237	73	1,453	6,847
1963	201	48	1,446	6,875
1964	227	64	955	7,011
1965	202	71	925	6,106
1966	151	50	1,026	6,068
1967	129	26	667	5,930
1968	118	35	538	6,340
1969	222	42	653	6,328
1969				
By Ages				
10-14	8			12
15-19	81			373
20-24	72			565
Arkansas VD Case Rate		354.2		
Little Rock VD Case Rate		787.8		

ERRATUM

The Arkansas Medical Society and the Journal of the Arkansas Medical Society wish to publicly retract an erroneous statement which was included in minutes read at the convention. This report was subsequently carried in the June issue of the Journal of the Arkansas Medical Society.

The minutes of the Council and the House of Delegates have been corrected and the name of Dr. M. H. Scott of Sebastian County has been listed in the group of "recently retired". Dr. Scott practiced medicine for over fifty years in Arkansas and retired from active practice early this year.

We sincerely regret that this mistake occurred. We offer our apologies to Dr. Scott and his family.

Incidence and Significance of Calcifications Within Operative Breast Specimens

R. H. Koehl et al (Yale Univ School of Medicine, New Haven, Conn)

Amer J Clin Path 53:3-14 (Jan) 1970

During an 11-month period 1,484 consecutive breast specimens were studied radiographically and microscopically to determine the incidence and location of clusters of calcification. Of 450 malignant tumors, 277 (62%) contained evidence of calcification. Of the 450 malignant tumors, 32 were lobular carcinomas in situ; 25 (78%) of these contained clusters of calcification. Of the 1,034 benign lesions, 238 (23%) contained clusters of calcification. The characteristics and microscopic locations of the calcifications in the benign and malignant lesions have been characterized. During this study of routin radiography of all breast specimens, four unsuspected carcinomas were detected in biopsies that otherwise would have been diagnosed as benign; four more unsuspected intraductal carcinomas were found in specimens that were already known to contain primary cancers. Finally, an area of infiltrating lobular carcinoma was located in a specimen in which only in situ lobular carcinoma had previously been found on routine pathologic examination.

EDITORIAL

Heart Disease

Alfred Kahn, Jr., M.D.

The Lancet has had several articles of general interest in past months on cardiology. Reporting from Auckland, New Zealand, Norris, Brandt, Caughey, Lee, and Scott (The Lancet, Vol. I, p. 274, Feb. 8, 1969) have proposed a new coronary prognostic index. This index was devised so that cardiac cases could be evaluated and compared without bias of age, shock, or other factors which might singly tend to invalidate statistics. They studied 757 patients with acute myocardial infarction. The diagnosis was established by filling two of the following three requirements: clinical findings, electrocardiographic changes, and enzyme changes. They ultimately chose six factors to make up their cardiac index: age, position and extent of infarction, admission systolic blood pressure, heart size, pulmonary congestion, and history of previous ischemia. It is of interest that some things seemed to make poor indices as sex; there was no significant difference; the time between the infarction and the admission to the hospital had no important prognostic value; they did not consider overweight, previous history of diabetes mellitus, and previous history of hypertension to be helpful. The authors put the six helpful prognostic factors into a programmed computer and thus derived their cardiac prognostic index.

Norris, Brandt, and Lee (The Lancet, Vol. I, p. 278, Feb. 8, 1969) used the coronary prognostic index to analyze mortality in a coronary care unit. They compared 300 patients treated in a coronary care unit with 545 patients treated outside a coronary care unit in three different hospitals. The authors cited the literature in which hospital mortality from acute myocardial infarction was reported to vary from 40% to 15% prior to coronary care units. Using the coronary prognostic index so that similar groups of patients could be compared, it was found that the coronary care unit reduced the death rate from myocardial infarction from 31% to 12%; the improvement is due to good resuscitation and to quick treatment of lethal arrhythmias. In their discussion, Norris, et al., stated that they thought coronary care units decreased the mortality in a third of their patients. There was no real improvement from cardiac care units in mortality in patients with a good prognosis, and there was no reduction in mortality in the desperately ill group.

The use of anti-coagulant treatment in heart disease is still under discussion; the literature tends to favor the use of anti-coagulant treatment, particularly in certain groups including the elderly, patients with congestive failure, certain arrhythmias, etc. Conceding that anti-coagulation is of value, there is still the question as to how long it should be employed. Ritland and Lygren (The Lancet, Vol. I, p. 122, Jan. 18, 1969) have published a study entitled, "Comparison of Efficacy of Three and Twelve Months Anti-Coagulant Therapy After Myocardial Infarction." They reviewed 208 cases of patients under 70 years of age with a first myocardial infarction. They divided the patients into Group A, who received anti-coagulant therapy for three months, and Group B, who received anti-coagulant therapy for twelve months. The drug used was Dicumerol. The study showed no difference in the death rate from cardiovascular disease between Groups A and B. Group A had nine re-infarctions and four sudden deaths; Group B had five re-infarctions and seven sudden deaths. The authors concluded that their results support the opinion that anti-coagulant

therapy should be used only in poor risk patients and only during the acute phase of the disease.

Another statistical review of interest was that reported by The Medical Research Council Working Party on the Treatment of Myocardial Infarction on "Potassium, Glucose, and Insulin Treatment for Acute Myocardial Infarction." The basis of this therapy was to try and restore the altered chemistry occurring in the damaged heart cells as a result of the injury by loss of blood supply. The therapy was not aimed at the cells in the center of the injured area, which were necrosed, but at the peripheral cells which, although injured, were potentially viable. These injured but viable cells were considered by some authors to be the point of origination of serious arrhythmias. Potassium being an important intracellular ion was implicated as a possible cause of arrhythmias in cell injury. Thus, sodi-Pallares and others suggested the use of potassium, glucose and insulin as "polarizing treatment" in cases of myocardial infarction. The British investigators studied two groups: a group on potassium, insulin, and glucose and a control group in which potassium, glucose, and insulin were omitted. In all, 840 patients, in three centers were studied. In the group on potassium, glucose and insulin, there were 98 deaths in 410 patients or 23.9%, and in the control group of 430 patients, there were 109 deaths or an average of 25.3%. The percentage of deaths difference in the patients on potassium, glucose, and insulin was insigificantly different from the control group. Thus, the use of the so-called polarizing treatment seems to be of little value.

Medical Ethics

John W. Trieschmann, M.D.*

The code of medical ethics has derived its definition not only from the Greek word ethos, meaning "a custom of practice" but also has literally been re-defined by almost every generation of practitioners. The code as defined by Hippocrates about 360 B.C. is probably the oldest professional code in the world and can be considered the pioneer in the field of professional self control. Others followed—the teachings of Christ and his disciples, in the writing of Maimonides, the Code of Percival in 1792, and in 1847 the American Medical Association. It is significant that at the first meeting of the AMA, the two principal items of business were the establishment of a code of ethical conduct and the creation of minimal requirements for medical education. Numerous revisions have been made since, the last being in 1966.

The following is the Preamble to the 1966 version: "These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationships with patients, with colleagues, with members of allied professions, and with the public." The guidelines are there. Volumes have been written regarding their applications to individual problems. In the end, however, the countless decisions each of us make day after day on the basis of our individual conviction of right and wrong will determine whether our conscience works for the ultimate good of those we serve. How this conscience is to be kept sensitive, dominant, and true in a time when so many influences are present to dull and misguide it is one of the most urgent problems of the day. Just because the general moral code of our society is changing all about us, just because we face new adversities both individually and collectively, does not necessarily mean we should change our standards of conduct in dealing with patients and our fellow practitioners, but rather we should find strength in the high standards set by our medical forebearers in the privacy of

* Presented at the banquet for 1970 graduates of the University of Arkansas School of Medicine, Little Rock, Arkansas, May 5, 1970.

their consulting rooms, the homes they visited and in their research laboratories. The public through years of experience has learned to place their confidence in us. Only we as individuals can destroy this confidence. I cannot, in the short time I have tonight, cover all the principles in our code of ethics nor would I desire this, but rather would like to look with you at some of the special problems confronting medicine today and in the years ahead.

The escalating cost of medicine has confronted the doctor with new problems. What if it is necessary for a patient to have the services of three or four doctors in a case? Is an effort made to see to it that the total charge is not exorbitant? All physicians concerned may say they have no control of their own. Are they careful to see that the patient is not overcharged? Do we or do we not yield to the temptation to pad a bill a little because Medicare or some private insurance service is paying a part of this? Certainly no one would say that the rising cost of hospital care today need be the primary concern of the doctor in his practice but he surely shares in this responsibility. The sins that are committed in the name of cost accounting to determine what should be fair service charges may not all be willful but they are hard on the patient's pocketbook. To add to all this; both attending physician and house staff are often unexcusably careless in ordering expensive procedures when they are not really necessary (for instance, a brain scan in one hospital costs $100.00). There are times when this may be of critical importance in making a diagnosis but, if Blue Cross or the government were not paying the bill most of these and other unduly costly tests often would and could be avoided.

Why are these considerations brought up in a discussion of medical ethics? It is because to be a party to anything which is not to the best interest of our patient is unethical.

Unless hospital administrators, physicians, insurance carriers and government officials get together and unselfishly attack the urgent problem of escalating costs, the public will take the matter into their own hands. We shall then have government control which may be quite unpalatable to all of us.

Another area of great concern today is the incompetent or irresponsible physician. Most hospital staffs and county medical societies have the mechanism to enforce discipline among their members. However, it is easy to pass the buck when it comes to disciplinary action in the medical profession, by shifting the responsbility to the State Medical Board or waiting until the medical practice act catches up with the offender is the easiest course, but the true ethical responsibility to our peers and the public lies in our hands and there it should be initiated and carried out. As history has born out, when demands for services by the public exceeds the capacity of the medical team—there creeps into our existence all sorts of practitioners—some licensed and some not, attempting to sell their wares. It is our ethical duty to protect the public and our image.

Another challenge to our standard of practice is in the area of privileged communication. The following appears in the Principles of Medical Ethics of the AMA. "A physician may not reveal the confidences entrusted to him in the cause of medical attendance, or the deficiencies he may observe in the character of patients unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community."

It is almost an impossibility to keep good records on patients and follow the above—nurses, house staff and consultants are allowed free access to the patient's records in the hospital. Beyond this—reports to insurance companies and Social Security officers, intrude into the sanctity of private communication.

You might be interested to know that, in the House of Delegates of the Arkansas Medical Society just one week past, this very issue drew more discussion than any other business carried on at that session.

I know of no way to combat intervention into a patient's privacy other than to omit in the patient's records that which may be detrimental to their welfare whenever it is practical. All we can do, for instance, in revealing to a prospective employer facts which may compromise a patient's chance of obtaining a job, is to let the patient know what we are doing, then be as truthful as we can.

Other areas that are confronting the modern physician—abortion, euthanasia, human experiments and others may involve sensitive perception and judgment.

As I see it—each of us, using the "Code of Medical Eethics" as a standard by which to judge his own conduct and decision, must obey the

dictates of his own conscience. We are, without question, entering a new era in which long established sacred and very personal relationships between patient and doctor are in jeopardy.

I have confidence in you young men entering our profession. But you will have some hard thinking and soul searching to do. The new direction in which American medicine is going is not necessarily bad just because it is different.

William Osler once said, "The philosophies of one age have become the absurdities of the next—and the foolishness of yesterday has become the wisdom of tomorrow."

RESOLUTIONS

Dr. Verdo T. Webb

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of one of its esteemed and respected members, Verdo T. Webb, M.D.; and

WHEREAS, Dr. Webb had devoted himself for many years to the private practice of medicine and more recently to serving in the field of Public Health; and

WHEREAS, the Society wishes to express its appreciation for Dr. Webb's contributions to the community and to express its sincere condolences to Dr. Webb's family;

BE IT THEREFORE RESOLVED: That we recognize our loss by making this resolution a part of the permanent minutes of this Society; and

That a copy of this resolution be forwarded to Mrs. Webb as an expression of our sincere sympathy; and

That a copy of this resolution be forwarded to the Journal of the Arkansas Medical Society for publication.

By Action of the Memorials Committee
T. Duel Brown, M.D., Chairman
Henry Hollenberg, M.D.
Robert Watson, M.D.
Approved by Executive Committee
May 20, 1970

Dr. Theodore C. Panos

WHEREAS, the recent untimely death of an esteemed member and colleague, Theodore C. Panos, M.D., has caused the membership of the Pulaski County Medical Society to reflect on its great loss; and

WHEREAS, Dr. Panos exemplified the example of a physician devoted to the betterment of the health of mankind in his chosen field of pediatrics; and

WHEREAS, his contribution to this Society will be long remembered by its members; and

WHEREAS, the members of this Society wish to convey to Dr. Panos' family their sincere sympathy;

BE IT THEREFORE RESOLVED: That this resolution be made a part of the permanent records of this Society; and

That a copy of this resolution be forwarded to the family of Dr. Panos; and

That a copy of this resolution be sent to the Journal of the Arkansas Medical Society for publication.

By Action of the Memorials Committee
T. Duel Brown, M.D., Chairman
Henry Hollenberg, M.D.
Robert Watson, M.D.
Approved by Executive Committee
May 20, 1970

OBITUARY

Dr. William H. Breit

Dr. William H. Breit of Harrison died June 4, 1970, at fifty-two years of age. He was born in Magnolia and had practiced medicine in Harrison since 1948.

Dr. Breit was a graduate of Hendrix College at Conway and the University of Arkansas School of Medicine, class of 1942.

He was a member of the Boone County Medical Society, Arkansas Medical Society, American Medical Association, the American Academy of General Practice, and the Southern Medical Association. A past president of the Harrison School Board, he was a veteran of World War II.

Dr. Breit is survived by his wife, two daughters, and a son.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

The House Ways and Means Committee approved legislation that would change the Medicare program to permit prepaid closed-panel group practice care and would set ceilings on physicians' fees under Medicare and Medicaid.

The committee did not consider national health insurance proposals for legislative action this year.

A proposal for inclusion of chiropractic under Medicare was rejected. However, a compromise provision would direct the Health, Education and Welfare Department to conduct a "very limited" study of chiropractic under Medicare, utilizing the experiences under Medicaid. Chiropractic now is a Medicaid service in 15 states, being authorized for federal funds to the extent that it is legal in the state. Representatives of chiropractors lobbied intensively with committee members for the same treatment under Medicare.

The committee also decided against inclusion of Social Security disabled beneficiaries under Medicare. Instead, the proposal was referred to the Health Insurance Benefits Advisory Council for further study.

The House was expected to approve the committee's bill, which included a five per cent increase in cash Social Security benefits, without change. However, changes were expected in the Senate.

Provisions of the committee bill of major importance to physicians included:

—Health Maintenance Organization Option: Individuals eligible for both Part A and Part B Medicare coverage would be able to choose to have their care provided by a health maintenance

ANSWER—Radiology Case of the Month

DIAGNOSIS:

Poget's diseose.

DISCUSSION:

The etiology of this diseose is unknown. It usuolly monifests itself during middle life with on overoge oge of onset of 45 yeors. Poin ond fotigue ore common symptoms. There is usuolly o striking elevotion of the olkoline phosphatase level sometimes reoching 20 times the normol level. The colcium and phosphorus ore usuolly normol. The roentgenogrophic chorocteristic feotures are clossicolly described in three stoges. These ore: 1) destructive, 2) combined destructive ond reporotive, 3) sclerotic.

The destructive stoge is best seen in the skull ond is monifested by well demorked deossificotion, spreoding slowly to encomposs the mojor portion of the colvorio. This process is colled osteoporosis circumscripto.

The second stoge is best seen in the pelvis ond long bones. The reporative process with heoling ond conversion produces sclerosis ond thickening of the bone. The third stoge is seen when the diseose becomes quiescent with lorge round oreos of sclerosis oppeoring, surrounded by demineralizotion cousing the "cotton bcll" oppeoronce.

REFERENCES:

Edeiken, J., Hodes, P.: Roentgen Diognosis of Diseoses of Bone. The Willioms ond Wilkins Compony, 1967.

ANSWER—Electrocardiogram of the Month

RATE: 130 RHYTHM: Sinus

PR: .13 sec. QRS: .09 sec. QT: .28 sec.

SIGNIFICANT ABNORMALITIES:

Increoseo voltoge of P woves.

Verticol heort c RSR′ in oVR, oVL.

INTERPRETATION: Abnormal

Sinus tochycordio.

Suggestive right otriol, ventriculor increose.

organization (a prepaid group health or other capitation plan). The government would pay for such coverage on a capitation basis not to exceed 95% of the cost of Medicare benefits provided to beneficiaries in the area not covered under the health maintenance organization.

—Experiments and Projects in Prospective Reimbursement and Incentives for Economy: The secretary of HEW would be required to develop experiments and demonstration projects designed to test various methods of making payment to providers of services on a prospective basis under Medicare, Medicaid and Maternal and Child Health. In addition, the secretary would be authorized to conduct experiments with methods of payment or reimbursement designed to increase efficiency and economy, and with community-wide utilization review mechanisms.

—Limitation on Recognition of Physician Fee Increases: Charges determined to be reasonable under the present criteria in Medicare, Medicaid, and Maternal and Child Health law would be limited by providing: (a) that for fiscal year 1971 medical charge levels recognized as prevailing may not be increased beyond the 75th percentile of actual charges in a locality during calendar year 1969; (b) that for fiscal year 1972 and thereafter the prevailing charge levels recognized for a locality may be increased, on the average, only to the extent justified by increases in the cost of production of medical services, levels of living and the earnings of other professional, managerial and technical personnel; and (c) that for medical supplies, equipment and services that, in the judgment of the secretary, generally do not vary significantly in quality from one supplier to another, charges allowed as reasonable may not exceed the lowest levels at which such supplies, equipment and services are widely available in a locality.

—Payments for Services of Teaching Physicians: Medicare and Medicaid would not pay for the services of teaching physicians unless other patients who have insurance or are able to pay are also charged for such services and the Medicare deductibles and coinsurance amounts are regularly collected. Medicare attached payment would be authorized for services to hospital patients by staff of certain medical schools that now furnish these services without charge to the hospital.

—Termination of Payments to Providers Who Abuse the Medicare Program: The secretary of HEW would be given authority to terminate or suspend payment for services rendered by a supplier of health and medical services found to be guilty of program abuses. Program review teams would be established to furnish the secretary professional advice in carrying out this authority.

—Repeal of Medicaid Provision Requiring Expanded Programs: The requirement in present law that States have comprehensive Medicaid programs by 1977 would be repealed.

—Prohibition of Reassignments: Medicare and Medicaid payments to anyone other than a patient or his physician would be prohibited, unless the physician is required as a condition of his employment to turn over his fees to his employer or unless there is a contractual arrangement between the physician and the facility in which the services were provided under which the facility bills for all such services.

—Utilization Review in Medicaid: Require hospitals and skilled nursing homes participating in the Medicaid and Maternal and Child Health programs to have the same utilization review committee with the same functions as in the Medicare program.

—Role of State Health Agencies in Medicaid: State health agencies would be required to perform certain functions under the Medicaid and Maternal and Child Health programs relating to the quality of the health care furnished to recipients.

—Physical Therapy Services Under Medicare: Under Medicare's supplementary medical insurance program, beneficiaries would be covered for up to $100 per calendar year of physical therapy services furnished by a licensed physical therapist in his office or the patient's home under a physician's prescription. Hospitals and extended care facilities could continue to provide covered physical therapy services to patients who have exhausted their days of hospital insurance coverage.

—Chiropractors' Services: HEW would conduct a study on covering chiropractors' fees (on a very limited basis) under Medicare, utilizing the experimental authority under the Medicaid program. A report on the study, including the experience of other programs paying for chiropractors' services would be submitted to the Congress within 2 years.

* * *

The American Medical Associated expressed

opposition to a proposed oral contraceptive package insert addressed to users.

The Food and Drug Administration first proposed a package insert of about 700 words dealing with possible side-effects and potential dangers of taking birth control pills. When this raised widespread opposition, the FDA drastically revised the original draft, cutting it down to about 100 words. Main objections to the first draft were that it was too long and detailed to be addressed to a patient and that it raised a serious question about the relationship between doctor and patient.

After the FDA invited comments on the revised draft from interested parties, Dr. Ernest B. Howard, executive vice president of the AMA, responded that the AMA opposes any oral contraceptive package insert. He said that, "in the best interests of the patient and the practice of quality medicine," there should be no package insert addressed to users.

". . . The requirement that information on the side-effects of a prescription drug be supplied directly to the patient is a dangerous departure from present practice," he said in a letter to the Health, Education and Welfare Department, of which FDA is a part. "It intrudes upon the patient-physician relationship and compromises individual medical evaluation. The proposed statement would lead to confusion and alarm among many patients and could result in harm to some.

"For these reasons, the American Medical Association is opposed to a package insert directed to patients for any prescription drug.

"The oral contraceptive is a prescription drug. It is the responsibility of the physician to inform his patients of the potential hazards of drugs he prescribes. In counseling on family planning, the physician has a further responsibility. He should provide information that will enable the patient to make an intelligent decision regarding the use of oral and other contraceptive methods."

"The proposed statement, in its simplistic approach to a complex situation, would confuse the patient who has already been informed of possible side-effects by her physician and who has received her physician's recommendation as to a desirable method of contraception for her. . . .

"A stated purpose of the insert is to 'reinforce the efforts of the physician to inform the patient in a balanced fashion of the risks.' The physician has a duty to weigh the benefits against the possible risk in prescribing any drug for a patient, and the physician's advice to the patient in connection with the drug prescribed must be individualized for each patient. The balanced fashion theory cannot be a part of good therapeutic practice, which requires an individual judgment for each patient. Standardized information could harm some patients by limiting the value of the specific information given to them by their physicians.

"A package insert is an inappropriate and ineffective means of providing a patient with information regarding any prescription drug. The best way to inform patients effectively is through the physician. The best way to reinforce the physician's efforts to inform the patient is to provide him with unbiased, authoritative and up-to-date information. Our Council on Drugs has used the Journal of the American Medical Association for this purpose. Further, in a forthcoming book titled AMA Drug Evaluations, we will supply the physician with comprehensive information on oral contraceptives as well as on other drugs. We would be pleased to join with the Food and Drug Administration and other concerned medical and scientific organizations in the preparation of any additional information, and to provide a means of placing it in the hands of all physicians. . . ."

* * *

The American Medical Association supported two Senate bills (S. 3297 and S. 3652) that would require labeling of prescription drug containers except where the prescribing physician indicated otherwise.

"We would emphasize very strongly, however," Dr. John J. Curry, a member of the AMA Council on Drugs, testified at a Senate Health Subcommittee hearing, ". . . that both bills fall short of the recommendation of the American Medical Association. In urging your support of labeling legislation, we strongly recommend that the legislative requirement provide that the label contain the established name or trade name of the drug as written by the physician, or in the case of a combination drug, the established name of the active ingredients of the drug or its trade name as written by the physician, and the quantity and strength of the drug. Provision should of course be made that the label would not contain any or all of the foregoing information where the physician so indicates."

The AMA also supported S. 3096 and another

provision of S. 3297 that would require a coding identification on each tablet, capsule or other final form of a medication.

The AMA did not take a position on a fourth bill (S. 3651) that would require inspection of drug manufacturing firms every six months, instead of the present two years. Dr. Curry said that he was concerned that medications he prescribed "are of maximum purity and manufactured under proper controls," but that he was not qualified to speak on the length of time between inspections.

Extended Care Facility Converted Into General Hospital

Wallace E. Johnson Enterprises, located in Memphis, Tennessee, has recently converted an extended care facility into a general hospital. The new hospital is located in Hot Springs.

Rubella Vaccine Available to All Children Between One and Eleven Years Old

Dr. J. T. Herron, State Health Officer, in a recent letter to Dr. Jack Kennedy, president of the Arkansas Medical Society, has asked that all Society members be made aware that the rubella vaccine is now available for *all* children between the ages of one and eleven. Heretofore, the vaccine has been provided for school-aged children only. It is predicted that another large increase in cases of rubella during the early 1970's may be expected unless mass immunization programs are executed quickly. The effort to eliminate rubella as a threat to unborn children, is of course, dependent upon the cooperation of county medical societies and private physicians throughout the State. The State Department of Health will furnish jet-injector equipment, technicians and clinic personnel, and other promotional services to any county medical society interested in sponsoring mass rubella clinics. Program requests should be addressed to:

Mr. Bruce D. Johnson
Immunization Activities
Arkansas State Department of Health
Little Rock, Arkansas 72201

State Board of Pharmacy and State Medical Board Ask Prescription Care

From the Arkansas Medical Board and the Arkansas Board of Pharmacy, notice has been received of the following:

(A) Routine checking of pharmacies and physicians has revealed some prescription violations.

1. Some are incomplete.
2. Some do not list the patient's address.
3. Some have illegible signatures or no signature at all.
4. Some are written by one person and signed by another.
5. Some have been signed by use of a rubber stamp.

(B) Many of the above are violations of both state and federal laws.

(C) The State Boards of Medicine and Pharmacy call upon physicians and pharmacists of the State to make any and all necessary corrections concerning the list of errors set out above. Prescriptions found to be in violation are being turned over to the appropriate licensing board.

PERSONAL AND NEWS ITEMS

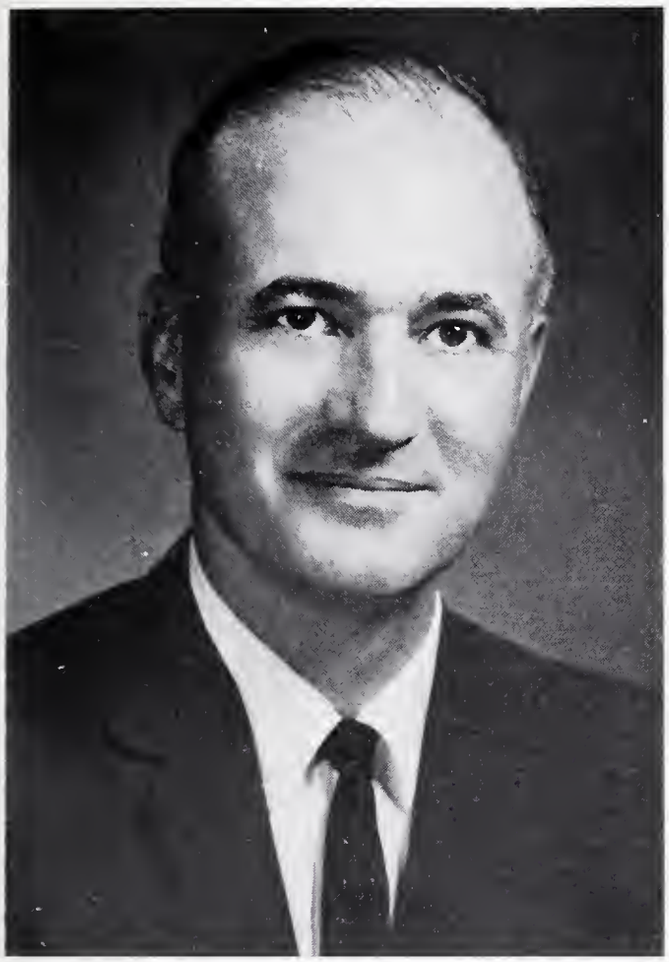
Dr. Decker Elected to Membership

Dr. Harold A. Decker, associate professor of pediatrics at the University of Arkansas Medical Center in Little Rock, was elected to membership in the American Academy of Pediatrics at its spring meeting.

Dr. E. L. Hutchison Elected President

The Urological Section of the Arkansas Medical Society named Dr. E. L. Hutchison of Pine Bluff as its new president for 1970-71. Election was held during the Annual Session at Hot Springs.

COUNCILORS ELECTED AT 1970 ANNUAL SESSION



C. Lynn Harris, M.D.
Hope
Sixth District

Dr. C. Lynn Harris of Hope was elected to the position of councilor for the sixth district at the annual meeting in Hot Springs earlier this year. He succeeded Dr. John P. Wood of Mena in the position.

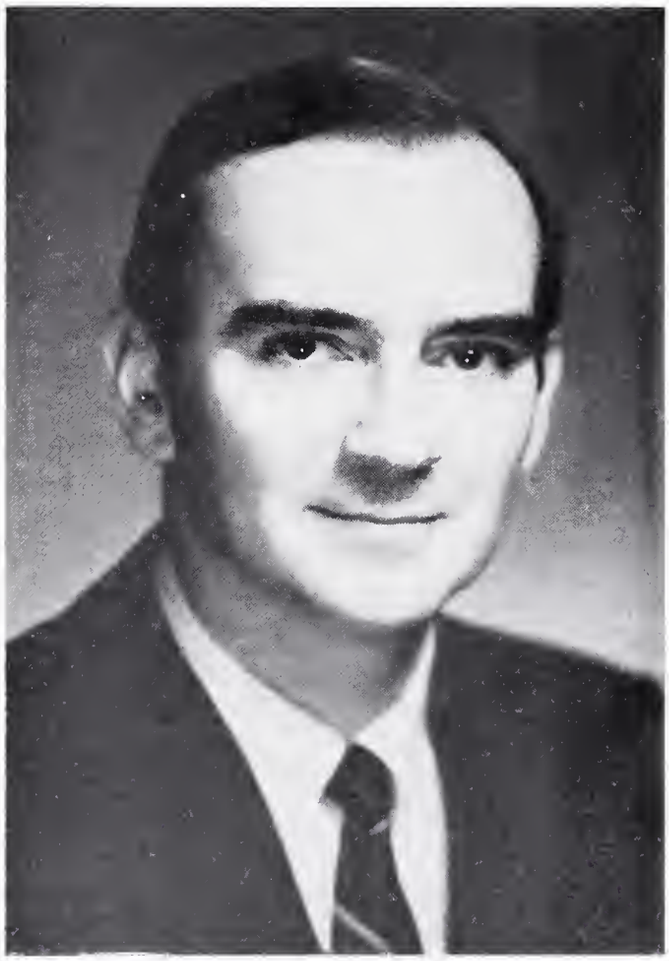
Dr. Harris was graduated from the University of Arkansas School of Medicine in 1953 and interned at William Beaumont Army Hospital in El Paso, Texas. Since 1954, he has been in general practice in Hope. He practices in partnership with his brother, Dr. Lowell Harris.

He is city physician for Hope and has been chief of staff of both Memorial and Branch Hospitals. He is a past president of the Hempstead County Medical Society. Dr. Harris has represented his county society numerous times as delegate to the Arkansas Medical Society.

Dr. Harris is a past president of the Hope Kiwanis Club, a Deacon of the Hope Presbyterian Church, a past president of the United Fund of Hope, a past director of the Hope Chamber of Commerce.

Dr. Harris' wife, Margaret, is currently serving as president of the Woman's Auxiliary to the Arkansas Medical Society. They have three children—Candice, a junior at Henderson State College; Steve and Marilyn, students at Hope High School.

Among hobbies enjoyed by Dr. Harris are golf, hunting, and fishing.



Morriss Henry, M.D.
Fayetteville
Ninth District

Dr. Morriss Henry of Fayetteville was elected to the position of councilor for the ninth district, filling the vacancy created by Dr. Stanley Applegate's election to the position of president-elect.

The son of Drs. L. Murphey and Louise M. Henry of Fort Smith, Dr. Henry attended Fort Smith Public Schools and completed his premedical education at Hendrix College in Conway. His M.D. degree was received from the University of Tennessee College of Medicine in 1955, and he also completed a rotating internship at that institution. He did residency train-

ing in ophthalmology at Harvard Medical School and the Massachusetts Eye and Ear Infirmary, Boston. Dr. Henry served as chief of the Eye Clinic in Bitburg, Germany, while on active duty with the United States Air Force. After military service, he began the practice of ophthalmology in Fayetteville with special emphasis on diseases and surgery of the retina.

Dr. Henry is clinical assistant professor in the ophthalmology department at the University of Arkansas Medical Center. He is on the active staff of the Washington General Hospital in Fayetteville and the Springdale Memorial Hospital in Springdale. He is also on the consulting staff at Baptist Memorial Hospital in Little Rock and Boone County Memorial Hospital in Harrison.

Dr. Henry was elected to the position of Washington County Coroner in 1965 and has served as a representative in the Arkansas Legislature since 1967. He is currently serving as vice chairman of the Public Health Committee of the Legislature. He has recently announced his candidacy for the Arkansas Senate.

Dr. Henry has completed most of the requirements for a law degree from the University of Arkansas School of Medicine.

Dr. Henry is married to the former Ann Rainwater, and they have three small children—Paul, Kathy, and Mark.

Mid-South Medical Assembly Names Dr. Schoettle as New Head

The Mid-South Medical Assembly, at its 81st annual meeting in Memphis, elected Dr. Glenn P. Schoettle of West Memphis as its new president for 1970-71.

Malvern Physicians Attend Course in Coronary Care

Doctors W. B. Kersh and Larry B. Brashears of Malvern were among physicians attending a postgraduate course in coronary care conducted at the University of Arkansas Medical Center in mid-May.

Dr. Ralph Downs to Be Guest of the British Association of Urological Surgeons

Dr. Ralph A. Downs of Little Rock will be the guest of the British Association of Urological Surgeons (membership includes representatives from the entire British Empire) this fall. At the meeting, which will be held at the University of Strathclyde, Glasgow, Scotland, Dr. Downs will present an exhibit. The exhibit will exemplify the high points of an article authored by Dr. Downs which appears in the February issue of the British Journal of Urology entitled, "Congenital Polyps of the Prostatic Urethra."

Dr. Headstream Elected

Dr. James W. Headstream of Little Rock has been elected to membership in the American Academy of Pediatrics as a Pediatric Urologist.

Southern State College Honors Dr. John Wilson

On May 3rd, Southern State College dedicated one of the most up-to-date classroom and laboratory buildings in Arkansas. Wilson Hall, built at a cost of $1,600,000, was so named in honor and recognition of Dr. John Harp Wilson of Magnolia, who has been a member of the Southern State College Board of Trustees for more than twenty-five years.

Fifty Year Doctors Honored

Three Harrison doctors—William A. Hudson, G. Allen Robinson and D. L. Owens, who have been practicing for fifty years or more—were honored by the Woman's Auxiliary to the Boone County Medical Society. Also honored was Dr. Ross Fowler, immediate past president of the Arkansas Medical Society. Dr. and Mrs. Rhys Williams were hosts to festivities.

Dr. Thicksten Attends Meeting of the Aerospace Medical Association

Dr. Jack N. Thicksten of Alma attended the 41st annual scientific meeting of the Aerospace Medical Association in St. Louis. Dr. Thicksten is a Lieutenant Colonel in the United States Air Force Reserve.

Doctors Plan Test of Teflon

Doctor Harry Hayes, Jr., associate clinical professor of surgery at the University of Arkansas Medical Center, and Dr. Kirk M. Smith, a surgery resident, will try to determine if Teflon migrates. Potentially useful in plastic surgery, the doctors will do the research under a $3,000 grant of the Ethicon Corporation of New York.

Dr. Futrell Home After Surgery

Dr. J. B. Futrell of Rector is home after undergoing surgery in Dallas to relieve an arthritic condition. His quick recovery is hoped for by all who know him.

Arkansas Doctors Re-elected to AAGP Membership

The American Academy of General Practice has announced the re-election to membership of the following physicians: Charles H. Chalfant, Jr., Booneville; Giles A. Sexton, Forrest City; Robert H. White, Malvern; Ben N. Saltzman, Mountain Home; James R. Weber, Jacksonville. Re-election signifies that these physicians have successfully completed 150 hours of accredited postgraduate study within the past three years.

Fort Smith Doctor Credited With Saving Passenger's Life

Dr. H. P. McDonald of Fort Smith recently was credited with saving a fellow passenger's life while aboard a Trans World Airlines flight to Washington, D. C. Dr. McDonald administered external heart massage and mouth-to-mouth resuscitation to a young man who suffered a cardiac arrest.

Dr. C. W. Jones, Sr., Honored

Dr. C. W. Jones, Sr., was honored by Memorial Hospital in Benton for fifty years of service in medicine. Dr. Robert Jones, son of the honoree and chief of the hospital staff, presented his father the award while his brother, Dr. C. W. Jones, Jr., observed from the audience.

Dr. Clifford Evans Announces New Associate

Dr. Clifford Evans of Morrilton announced recently that Dr. Thomas L. Buchanan, a native of Wynne, has joined him in the general practice of medicine at the Magie Clinic in Morrilton.

Dr. Dunaway Resumes Practice

Dr. Edwin L. Dunaway of Conway resumed his medical practice in May after illness had kept him out of his office since last October.

Arkansas Public Health Association Honors Dr. Saltzman

Dr. Ben N. Saltzman, Mountain Home, was presented during the wards banquet of the Arkansas Public Health Association with a plaque in recognition of "outstanding achievement in the field of public health for the State of Arkansas." The presentation was made by Dr. Edgar J. Easley, Director of Health Services and Assistant State Health Officer, Little Rock.

Dr. Gilbert Dean Receives Distinguished Service Award

At the unified commencement exercises of the University of Arkansas at Little Rock and the University's School of Medicine, Dr. Gilbert O. Dean received the School of Medicine's distinguished service award. Dr. Dean is a clinical professor of surgery on the institution's volunteer faculty.

Dr. Egeberg Made Honorary Hot Springs Citizen

Dr. Jack Kennedy, president of the Arkansas Medical Society, presented a certificate to Dr. Roger O. Egeberg, (assistant secretary for health and scientific affairs, Department of Health, Education and Welfare, Washington, D. C.) making him an honorary citizen of Hot Springs. The presentation was made at the May meeting of the Arkansas Public Health Association's annual session.

PROCEEDINGS OF SOCIETIES

Emergency Care Receives Continued Attention From County Societies

Clark and Independence County Medical Societies have, in their respective counties, sponsored, in recent months, three-day instructional programs open to the general public on the care and transportation of the sick and injured. Co-sponsoring each of the courses has been the Safety Division of the State Department of Health, directed by Mr. J. T. Jaynes.

Ministers and Physicians Meet in Lawrence County

Lawrence County Medical Society sponsored a May physician-minister conference. At the meeting, mutual problems relating to medicine and religion were discussed.

NEW MEMBERS

Little River County Medical Society announces DR. ROBERT HUGHES WARREN as a new member.

A native of Beebe, Dr. Warren attended Baylor University in Waco, Texas, receiving his B.S. degree there in 1964. In 1967, he graduated from the University of Arkansas School of Medicine and subsequently interned at Confederate Memorial Medical Center in Shreveport, Louisiana. He also completed a year of residency in pediatrics at that institution.

A former member of the National Guard, Dr. Warren is currently in general practice at Ashdown Clinic in Ashdown.

* * *

DR. PATRICIA J. BIRUM is a new member of the Pope County Medical Society.

Born in Union City, Indiana, Dr. Birum attended the University of Indiana, graduating in 1952 with an A.B. in chemistry. In 1955, she received the M.D. degree from that university's School of Medicine.

Dr. Birum did her internship at Orange County General Hospital in California. From 1957 to 1969, she practiced in Union City, Indiana, before moving to Arkansas.

Dr. Birum's office address is Route 1, P. O. Box 333, in London. Her type of practice is anesthesia.

Pulaski County Medical Society announces three new members. They are: Dr. Stuart Dean Kustermann, Dr. George Joseph Lucas, and Dr. Charles W. Silverblatt.

* * *

DR. STUART DEAN KUSTERMANN was born in Minneapolis, Minnesota, and received his pre-medical training at St. John's University in Collegeville, Minnesota. He was a 1946 graduate of the University of Minnesota Medical School.

Dr. Kustermann interned at Philadelphia General Hospital in Pennsylvania and also completed four years as a resident in pathology at that hospital. He is board certified in pathology.

Dr. Kustermann is a member of the American Medical Association, American Society of Clinical Pathologists, International Academy of Pathology, and the College of American Pathologists.

He is now Assistant Professor of Pathology at the University of Arkansas School of Medicine in Little Rock.

* * *

DR. GEORGE JOSEPH LUCAS is a native of Bridgeport, Connecticut.

Dr. Lucas attended Georgetown University in Washington, D. C., graduating with a B.S. degree in 1951 and his M.D. degree from that institution's School of Medicine in 1955.

His internship was completed at District of Columbia General Hospital and a three-year residency in neurology done at the University of Wisconsin Medical Center in Madison. Board certification in neurology was conferred by the American Board of Neurology in 1966.

Dr. Lucas is a member of the American Medical Association, Southern Medical Association, and the American Academy of Neurology. He is a past instructor of Neurology at Georgetown University.

Dr. Lucas currently is Assistant Professor of Neurology at the University of Arkansas Medical Center with his office at Veterans Administration Hospital, 300 East Roosevelt Road in Little Rock.

* * *

DR. CHARLES W. SILVERBLATT was born in Memphis, Tennessee. After attending public schools in Osceola, he received his pre-medical education from Murray State University, Murray, Kentucky.

Dr. Silverblatt graduated from the University of Arkansas School of Medicine in 1945 and then interned at St. Louis City Hospital in Missouri. His residency in internal medicine was completed at Coral Gables Veterans Administration Hospital, Coral Gables, Florida. Board certification in internal medicine was conferred upon him in 1962.

Dr. Silverblatt, formerly a member of the Department of Medicine at the University of Arkansas School of Medicine, is now the director

of the Arkansas Regional Medical Program, located at 500 University Tower Building in Little Rock.

* * *

Randolph County Medical Society has added DR. KARL R. BROOK to its membership rolls.

Dr. Brook was born in Philadelphia, Pennsylvania. His A.B. degree was attained in 1951 from the University of Pennsylvania. He was graduated from the University of Pennsylvania School of Medicine in 1955.

Dr. Brook interned at Mount Sinai Hospital in Miami, Florida. He then practiced medicine in Opa Locka, Florida, for thirteen years.

Dr. Brook now is in general practice at Williford, Arkansas. His address is P. O. Box 575.

* * *

Washington County Medical Society has recently added the following four physicians to its membership: Dr. John M. Boyce, Dr. Charles T. Edmondson, Dr. Glennon A. Horner, and Dr. Merlyn Bryan Page.

DR. JOHN M. BOYCE is a native of Wright City, Oklahoma. His pre-medical education was obtained from Henderson State Teachers College at Arkadelphia. He then attended the University of Arkansas School of Medicine, graduating in 1957.

Dr. Boyce's internship was done at Confederate Memorial Medical Center in Shreveport, Louisiana. He then completed his residency in pathology at Lafayette Charity Hospital in Lafayette, Louisiana.

Dr. Boyce is a member of the American College of Pathologists and the American Society of Clinical Pathologists. He is board eligible in that specialty.

Currently, Dr. Boyce is practicing pathology at 609 West Maple in Springdale.

* * *

DR. CHARLES T. EDMONDSON was born in Locust Grove.

In 1947, he graduated from Arkansas College at Batesville with the B.S. degree. Dr. Edmondson then attended the University of Arkansas School of Medicine, graduating in 1951. His internship was done at Missouri Methodist Hospital in St. Joseph, Missouri.

From 1966 to 1969, Dr. Edmondson completed a residency in radiology at Scott and White Memorial Hospital in Temple, Texas. He now has passed his written exams leading to certification in the specialty.

Limiting his practice to radiology, Dr. Edmondson's address is 131 Rogers Circle Drive in Springdale.

* * *

DR. GLENNON A. HORNER was born in Cassville, Missouri, and graduated with the B.S. degree from Southwest Missouri State in 1952. In 1953, he received his M.S. degree from the University of Arkansas.

Dr. Horner gained his M.D. degree from the University of Missouri School of Medicine in 1957 and then interned at the Kansas City General Hospital in Kansas City, Missouri. Subsequently, he returned to the University of Missouri School of Medicine to do a three-year residency in anesthesiology. He is now board certified in that specialty.

A former officer in the United States Air Force, he is a member of the American Society of Anesthesiologists.

Dr. Horner, limiting his practice to anesthesia, has his office at 660 Lollar Lane in Fayetteville.

* * *

DR. MERLYN BRYAN PAGE was born in Poteau, Oklahoma.

Dr. Page obtained his B.S. degree from the University of Arkansas in 1957. He was a 1965 graduate of the University of Arkansas School of Medicine before interning at Hillcrest Medical Center in Tulsa, Oklahoma. He also did his three-year residency in obstetrics and gynecology at Hillcrest Medical Center.

He served in the United States Air Force from 1954 to 1958. Dr. Page is a Junior Fellow, American College of Obstetrics and Gynecology, and a Junior Fellow, American Fertility Society. He currently practices that specialty with offices at 207 East Dickson in Fayetteville.

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Percutaneous Lung Biopsy

John C. Schultz, M.D., and James R. Rasch, M.D.*

The classical diagnostic techniques of X-rays, skin testing, serological and bacteriological studies are usually sufficient in patients with pulmonary diseases. In some patients, the diagnosis is not established. Then histological study is necessary. This is a report of patients whose diagnosis could not be established by these ordinary methods. All patients were completely evaluated before a percutaneous lung biopsy was done.

The lung biopsy was performed using a Frankling modification of the Vim-Silverman needle. This modification has metal plugs to prevent loss of the specimen. The biopsy is done with local anesthesia, in expiration, and if necessary fluoroscopic placement of the needle is used. The pathological diagnosis was obtained in 19 of 25 patients. The technique is not considered the last resort and if no diagnosis is made, then other tissues are studied. Frequent asymptomatic pneumothorax occurs as a recognized and understandable complication. One patient required thoracentesis for removal of air. One patient, since this data was collected, has required placement of an intra-cath in the chest for pneumothorax.

The diagnosis was missed in 6 of the 25 patients. The ultimate diagnosis in these patients was desquamative interstitial pneumonia, miliary tuberculosis, miliary histoplasmosis, localized tuberculosis, carcinoma and dermatomyositis. The first three of these patients had such generalized X-ray involvement that the technique should have been diagnostic.

Thoracotomy with biopsy made the diagnosis in the patients with desquamative interstitial pneumonia, miliary and localized tuberculosis. Lymph node biopsy was diagnostic in the patient with carcinoma. Bone marrow culture was positive for histoplasmosis in one patient and muscle biopsy demonstrated the diagnosis in the last patient.

Critical to the safe performance of percutaneous needle lung biopsy, is an understanding of the contraindications. At present, these are an uncooperative patient, recognized pulmonary hypertension and bleeding tendency. A number of patients with leukemia and lymphoma have serious pulmonary diseases. A liberal use of lung biopsy is indicated, as the pulmonary lesions are often bizarre.

To show the usefulness of the procedure, the reports of five patients follow. The requirements

Figure I

Nodular lesion left sixth anterior interspace.

*Reprint requests to Dr. John C. Schultz, 900 North University, Little Rock, Arkansas 72207.

Presented in part at St. Louis University Medical Alumni Meeting, October 16-19, 1969.

of multiple histological sections, fluoroscopic needle placement for biopsy of small lesions and knowledge of recent advances in pulmonary pathology are highlighted.

Patient No. 1: A patient with lupus erythematosus complained of dyspnea, chest pain, recurrent phlebitis and bloody sputum. He was a 53-year-old white man who smoked cigarettes heavily. The chest X-ray (Fig. 1) showed a small lesion in the sixth left anterior interspace on 7/6/67. In October, 1967, for intermittent severe chest symptoms and progression of the X-ray abnormality, consultation was obtained. A percutaneous lung biopsy was performed on 10/23/67. The histology (Fig. 2) showed nonspecific interstitial fibrosis. This nonspecific diagnosis should be accepted with care. Additional sections showed carcinoma (Fig. 3). The primary site was never established.

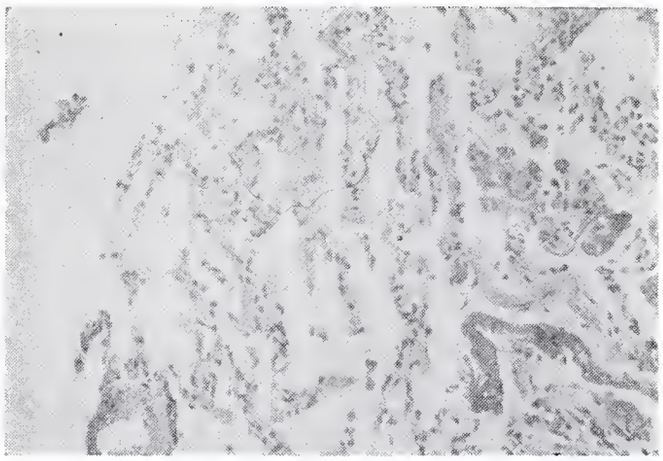


Figure 2
Nonspecific interstitial fibrosis. (Reduced from 450X).

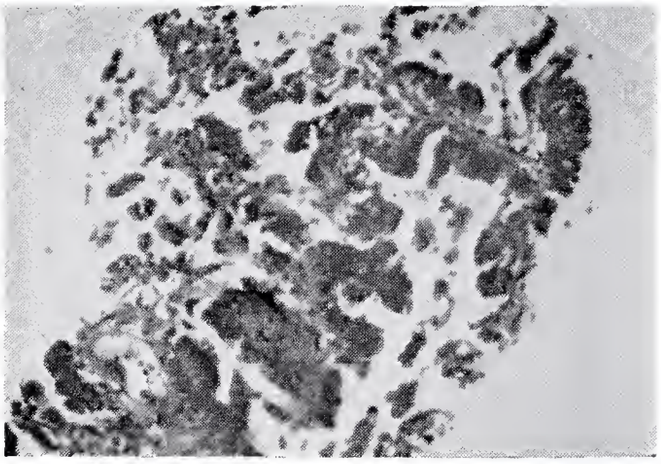


Figure 3
An additional cut from the same specimen showing dark staining metastatic carcinoma cells. (Reduced from 450X).

Patient No. 2: Chronic Prednisone therapy was given a patient with hemolytic anemia. He was a 67-year-old man and had previously suffered recurrent right upper and lower lobe pneumonia, which was unexplained. The current X-ray (Fig. 4) showed a left upper lobe lesion. All cultures were negative. With fluoroscopic placement of the needle, a percutaneous lung biopsy was done. The specimen (Fig. 5) showed a granuloma with giant cells. Subsequent cultures of gastric washings grew Mycobacterium tuberculosis, niacin positive. His tuberculosis was treated with isoniazid, ethambutal and streptomycin and the patient improved.

Figure 4
Fibrotic infiltrate right upper and lower lung; left upper lobe, noncircumscribed lesion.

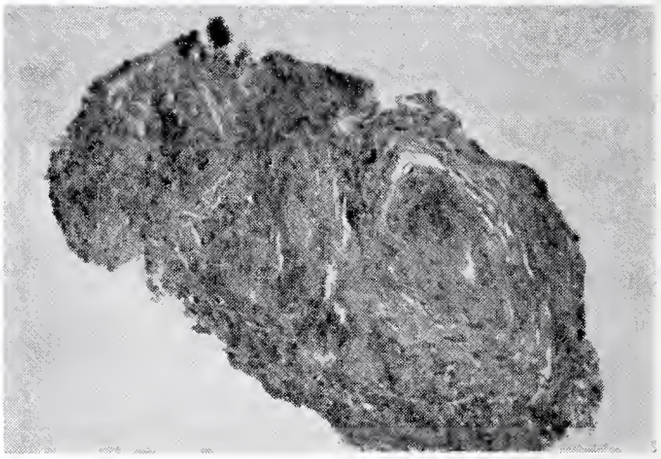


Figure 5
Granuloma with giant cells. (Reduced from 100X).

Patient No. 3: A beautician had six weeks of fever, weight loss and nonproductive cough. She progressively worsened and was unrespon-

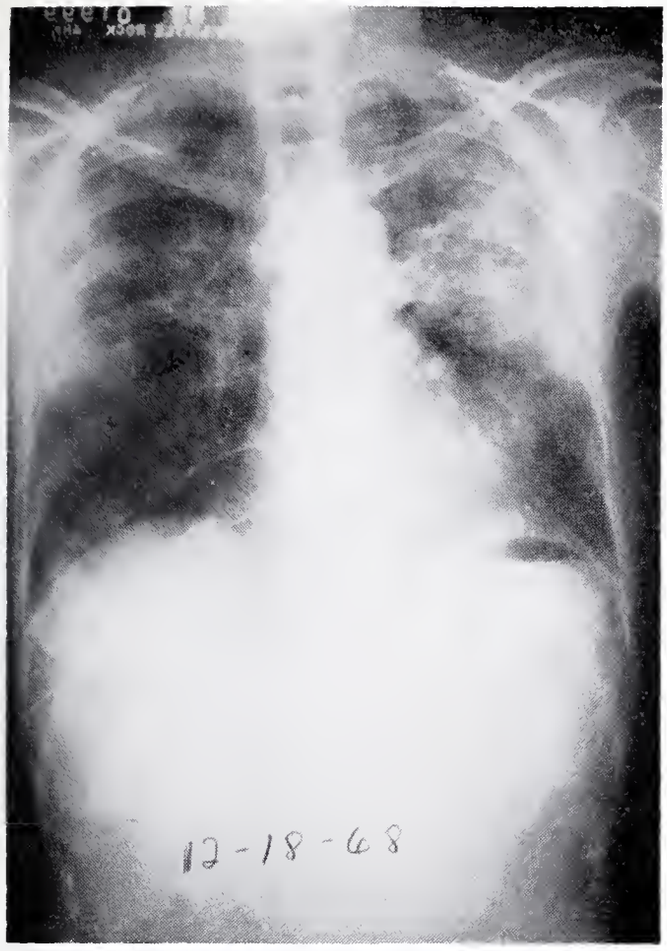


Figure 6
Multiple bilateral noncircumscribed confluent upper lobe infiltration.

sive to antibiotics. The chest X-ray (Fig. 6) shows a noncircumscribed confluent, bilateral, upper lobe lesion, worse on the left than on the right. The lung biopsy shows well formed col-

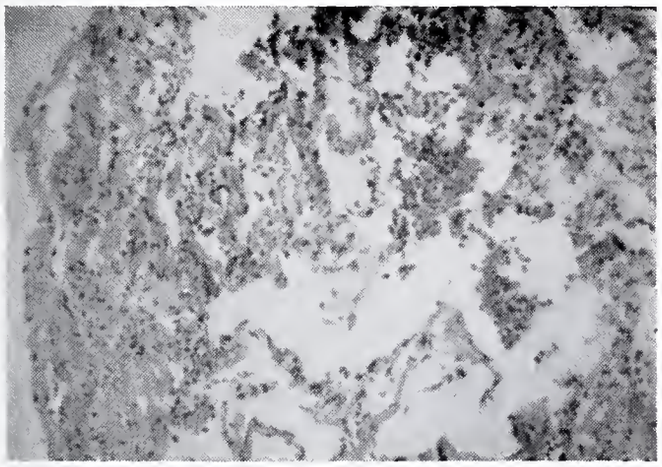


Figure 7
Collections of eosinophils, some within alveoli. (Reduced from 450X).

lections of eosinophils (Fig. 7). This is allergic granulomatosis of the lung as described by Dr. Liebow. Forty mg. of Prednisone daily was administered and on the 16th day a repeat X-ray (Fig. 8) shows resolution of the inflammatory process.

Patient No. 4: A 69-year-old man with fever

Figure 8
Resolution of bilateral noncircumscribed infiltrative disease on the sixteenth treatment day.

and nonproductive cough was treated with penicillin and kanamycin shots for penumonia. His X-ray (Fig. 9) shows a left upper lobe, noncircumscribed, confluent inflammatory process. His physicians suspected tuberculosis, but repeated skin tests were negative and no pathogens were isolated from the sputum culture. A percutaneous lung biopsy was done with fluoroscopic placement of the needle. The tissue (Fig. 10) was not recognizable as lung. There is necrosis with acute and chronic inflammatory cell infiltration. The diagnosis of ordinary bacterial lung abscess was made and the patient improved with penicillin.

Patient No. 5: A 61-year-old man complained of cough, bloody sputum and right posterior chest pain. He was a lifetime heavy smoker. Multiple cultures were negative and his surgeon found no tumor by bronchoscopy. The patient was treated unsuccessfully with antibiotics. His chest X-ray (Fig. 11) demonstrates a right lower lobe lesion without complete consolidation and the possibility of a right perihilar mass is suggested. A lung biopsy (Fig. 12) showed carcinoma cells and chronic interstitial fibrotic reaction.

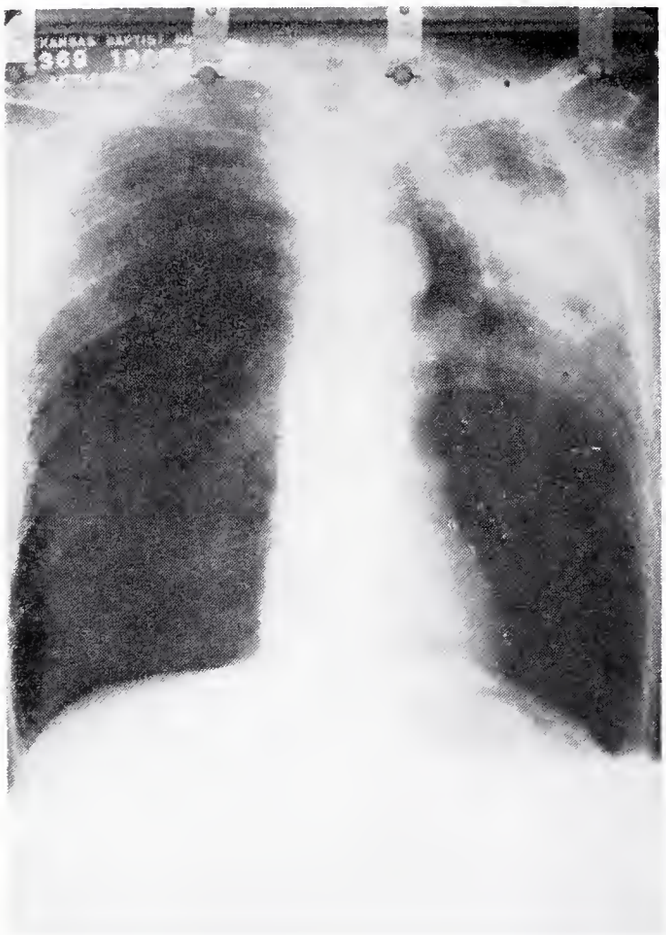


Figure 9
Noncircumscribed confluent left upper lobe infiltration with cavities.

Figure 11
Right lower lobe mass lesion.

The patient was treated with cobalt. Subsequently, the right lower lobe was resected. Histological study confirmed the diagnosis of carcinoma, probably bronchiolar cell in origin.

Summary

If the more usual methods of study are unproductive, percutaneous lung biopsy is indicated to establish the diagnosis in patients suffering from serious lung disease. The technique is safe with the precautions outlined. The aid of a radiologist is often required. The technique produces tissue for bacterial, tuberculosis and fungus culture. The tissue must be multiple sectioned and often multiple stains are required. Unless the physician, radiologist and pathologist have a special interest, the technique will be regularly unsuccessful. However, with maximal cooperation, the specimen is often productive of the diagnosis.

ACKNOWLEDGMENT

The authors express appreciation to Ella Mae Barrow and Fern Taylor for technical assistance.

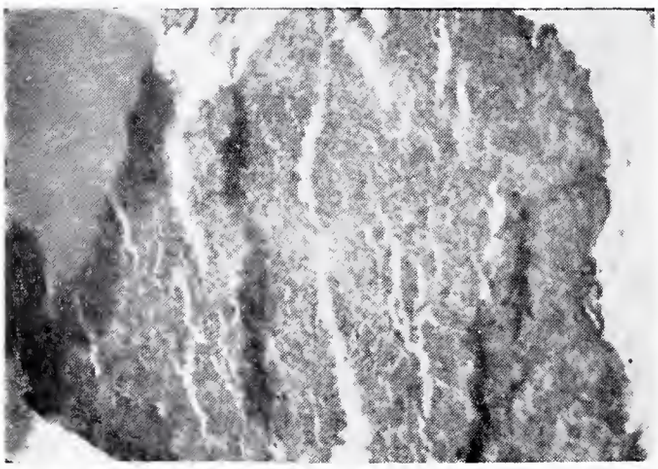


Figure 10
Necrotic tissue with acute and chronic inflammatory cells.
(Reduced from 100X).

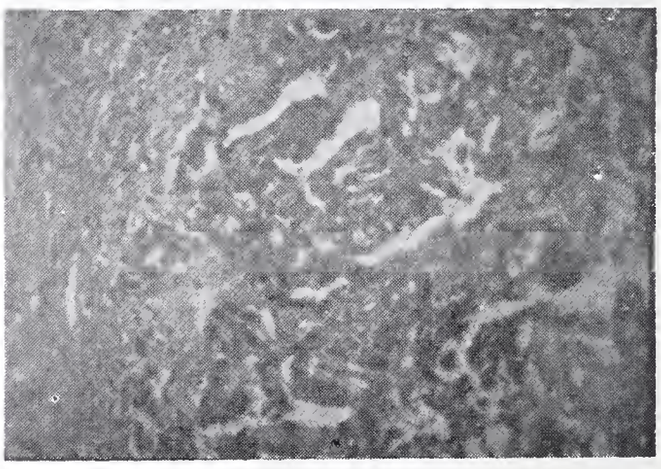


Figure 12
Carcinoma and interstitial fibrosis in the same section.
(Reduced from 450X).

Amblyopia: Early Diagnosis and Treatment

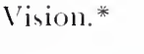
F. Hampton Roy, M. D.*

Many visual handicaps start during childhood. The major visual handicap in children is amblyopia ex anopsia (lazy eye).[1] Delay in treatment past 6 years of age may result in a permanent visual impairment. Life expectancy now is 70 years or longer barring war or an automobile accident. Not only a long life but a full and productive life is desirable: one not restricted by preventable handicaps.

Amblyopia ex anopsia is the loss of vision (amblyopia) in one eye, occurring without any demonstrable organic change. It originates from a visual inbalance between the two eyes and the consequent disuse of the weaker eye (ex anopsia).[1] The amblyopia may be due to a strabismus (esotropia if the eye turns in and exotropia if the eye turns out) or a refractive error. If a large difference in refractive error between the two eyes is present, one eye would develop amblyopia. In this case, the eyes would be straight, but the vision blurred in one eye.

The incidence of amblyopia is about 2% of the population or 1 in 50 persons. To better illustrate the incidence, about two million individuals are affected.[2] Why then is it that so many people have amblyopia? The basic problem is there are too many children and not enough doctors. All first graders in Arkansas currently have their vision checked with the cooperation of the Public Health Nurse, School Nurse, and Health Department.[3] As the prognosis of amblyopia worsens with each passing year, many volunteer non-medical groups including Delta Gamma Alumni, Lions Club, Junior Auxiliaries, Tri-Service League, Junior Charity League, Jaycettes, Medical Auxiliary and Family Service at the Air Base have conducted amblyopia screening programs. Of the approximately 90,000 four- and five-year-olds in Arkansas now, only 8,317 were tested for amblyopia by these service groups—10%. We very much need your help to check vision in these children. You can help by having your office personnel check visual acuity in your office and through service clubs conducting amblyopia screening programs. Professional help is available to organize amblyopia screening programs.*

The diagnosis of amblyopia rests simply with checking the visual acuity. Each eye is separately tested for its visual acuity. In this way, any difference of the sharpness of vision between the two eyes is noted.

As part of the routine physical examination of a child 4 to 6 years of age, the visual acuity should be checked. Children under 6 years rarely know the alphabet so the visual acuity is checked with illiterate E charts. This is an eye chart with "E"s turned in different directions and sizes that is  is used. It can be obtained from the House of Vision.*

The following is a possible way to conduct the vision screening. The "E" chart is hung on a wall in a hall. Illumination is very satisfactory with a gooseneck lamp with a 100 watt bulb about 12 inches to one side. The lamp can be moved to one side when not in use. Twenty feet from the chart, a small piece of tape is placed on the baseboard to mark the correct visual distance. The office assistant tells the child the is a table and have him point in the direction the "legs" of the table are pointing, an accurate vision may be obtained. The child or mother can cover each eye separately, while standing at the 20 foot line. The office assistant stands at the chart and points out single letters.

As well as picking up amblyopia, checking the visual acuity helps pick up significant refractive errors. By 4 years of age the vision should be 20/50 and by 6 years of age 20/30 in either eye.

With a simple screening of the visual acuity of each eye, many individuals are picked up early who later might otherwise have a permanent visual handicap.

Discovery of a child with a discrepancy of visual acuity between the two eyes should prompt referral to an ophthalmologist for evaluation and Rxment.

* From the Division of Ophthalmology and Research, University of Arkansas Medical Center and Little Rock Veterans Administration Hospital, Little Rock, Arkansas 72206.

Reprint requests to Little Rock Veterans Administration Hospital, 300 East Roosevelt Road, Little Rock, Arkansas 72206.

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* Dr. Rex Ramsey, Attn: Mrs. D. Zimmerman, State Health Department, Little Rock, Arkansas 72201.

* House of Vision, 135-37 North Wabash Avenue, Chicago, Illinois 60602.

B3598 Illiterate E Test Chart 10" x 28" Snellen rating direct 20/15 to 20/200. $1.90.

B3593 Snellen Test Chart 10" x 28" direct 20/15 to 20/200. $1.90.

Summary

Amblyopia is a prevalent disorder characterized by diminished vision in one eye. Early detection by 4 to 6 years of age changes amblyopia from a permanent visual handicap to a treatable disorder with a favorable prognosis. By checking the visual acuity as part of a routine physical examination in a child, amblyopia can be detected early and treatment started early. This can be done with a minimum of equipment and time.

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I would like to acknowledge the secretarial assistance of Miss Mary Kelly.

His Bundle Electrograms in Two Cases of Wolff-Parkinson-White (Pre-excitation) Syndrome

A. Castellanos, Jr., et al (Jackson Memorial Hosp, Miami, Fla)

Circulation 41:399-412 (March) 1970

The catheter technique for recording electrical activity of the specialized conducting system in the human heart showed in two patients studied that ventricular pre-excitation was apparently due to a bypass of the His bundle. Intermediate forms of Wolff-Parkinson-White (WPW) complexes appeared to be combination beats resulting from the activation of the ventricles through impulses traversing both the His bundle and accessory communications. Preferential iatrogenic activation of an intra-atrial (and perhaps even of atrioventricular) tract appeared to occur in one of the patients. The patient with the WPW (pre-excitation) syndrome and history of paroxysmal arrhythmias was successfully treated with a combination of oral propranolol and implanted (transvenous) demand pacemaker.

Hypotensive Therapy in Stroke Survivors

A. B. Carter (Ashford Hosp, Ashford, Middlesex, England)

Lancet 1:485-489 (March 7) 1970

A prospective randomized controlled trial of hypotensive therapy in 97 hypertensive patients surviving an ischemic-type stroke was carried out over a period of four years. The mortality rate at the end of a two- to five-year follow-up was 26% in the treated group and 46% in the untreated, and the nonfatal recurrence rate was 14% in the treated and 23% in the controls. In patients aged over 65, treatment of systolic hypertension was of no benefit.

^{125}I-Labelled Fibrinogen Test Adapted for Routine Screening for Deep-Vein Thrombosis

V. V. Kakkar et al (King's College Hosp Medical School, London)

Lancet 1:540-542 (March 14) 1970

A new apparatus for the detection of deep-vein thrombosis, using the ^{125}I-labelled fibrinogen test, is described. Forty patients were studied and results with the new method (ratemeter) and the older method (requiring radioactive counting and calculations) were compared. Counts with the two methods correlated well, and both methods detected deep-vein thrombosis in the six patients in whom this complication developed. There were no false positives.

Exercise Deprivation

F. Baekeland (Downstate Medical Center, Brooklyn, NY)

Arch Gen Psychiat 22:365-369 (April) 1970

The sleep of 14 normal college students accustomed to regular exercise was studied on two days when they exercised and on four nights over a one-month period during which all exercise was prohibited. A change in sleep patterns suggesting increased anxiety was seen over the exercise-deprivation period. Subjective reports from the subjects indicated impairment of home sleep patterns, increased sexual tension, and an increased need to be with others. Only amounts of wakefulness could be related to reported decreases in sleep depth. Although there was a transient borderline reduction in stage 4 sleep at the beginning of the no-exercise period, stage 4 sleep levels did not change significantly over the month-long period of exercise restriction taken as a whole.

Treatment of Insect Sting Reactions

Kelsey J. Caplinger, M.D.; Bill F. Hefley, M.D.; Fred J. Kittler, M.D.;
Purcell Smith, Jr., M.D., and Alan G. Cazort, M.D.*

Introduction

Death after insect stings is a well known medical entity, often publicized in both lay and medical literature. However, there is a surprising lack of awareness of the existence of an effective means of treatment for this hypersensitivity state. The purpose of this paper is to focus attention on the methods of treatment currently available. Because several excellent reviews are available,[1,2,3] no attempt will be made to completely review the problem of insect identification and habits or the immunology of hymenoptera sensitivity.

History

The earliest record of death from an insect sting is contained in the hieroglyphics found in the tomb of King Menes in 2641 B.C.[4] The first report in American literature was by Mease in 1911.[5] It is interesting to note that fifty percent (50%) of all deaths from venomous animals in the United States are caused by stings of insects.[4] Each year more people die in the United States from an allergic reaction to bee stings than from rattlesnake bites.[6]

Clinical Picture

The clinical picture of insect sting hypersensitivity reveals a progressive degree of severity, especially when there is a lapse of weeks or months between stings. Progression of reactions from local swelling and urticaria to generalized swelling and angio-edema is common. This may then progress to dyspnea and wheezing, faintness, collapse in allergic shock and death. The dramatic severity of the reaction to hymenoptera is one of the most intense in clinical medicine, paralleling that seen from aspirin and penicillin or the most severe response to shellfish manifested in certain allergic patients. Autopsy may show pulmonary edema, cerebral intraventricular hemorrhage or cutaneous and cerebral petechiae, but at times anatomical abnormalities are minimal.

As the severity of the clinical reaction progresses, the interval between the sting and onset of symptoms shortens in an alarming manner. The average time between the sting and death in fatal cases is *ten minutes*.[6]

Other less common symptoms include recurrent angio-edema, neuritis, possibly nephritis and a delayed reaction resembling a serum sickness-like syndrome.

A few patients having a generalized reaction subsequently will have a milder, less severe reaction when restung. Unfortunately, we have no way of predicting who these lucky few will be.[6]

The problem of the severe reaction to insect stings is made more intense by at least three additional factors. First, the sensitive individual may be only casually concerned or aware of his allergic state. A previous sting may have evoked only a modest reaction or no response. A subsequent sting may have sudden and dramatic consequences. The susceptible patient may not be an atopic individual.[7] Fifty percent (50%) of patients who experience severe generalized reactions had no warning from previous stings.[8] The second point is that there is usually not time for the endangered person to call his physician or report to the emergency room. Finally, the problem is complicated because insect stings are likely to occur in locations where prompt medical aid is not available.

The peak incidence for insect stings is July and August,[3] although stings may occur perennially, depending on exposure. Young boys incur more stings than girls and adults are likely to suffer increasingly severe reactions after age 30.[1] Generalized reactions with shock are seen less frequently in childhood,[3] but have been reported in small infants.

Treatment of Insect Sting Reactions

(1) Immediate Treatment—Since stings often occur in geographically remote locations, treatment must often be initiated by the patient or a member of his family. We wish to emphasize again that the allergic reaction may progress with frightening rapidity and there is often not time to seek the aid of a physician. The treatment of choice is 1:1,000 aqueous epinephrine (adrenalin).[9] The initial dose subcutaneously can be about 0.20 cc. for a small child and about 0.50 cc. for an average adult. Additional doses of epi-

* From Arkansas Allergy Clinic, 4001 West Capitol, Little Rock, Arkansas 72205.

nephrine are usually indicated and may be given according to the severity of the reaction, depending on the medical status and age of the patient. Adrenalin given at five to ten minute intervals is quite safe and for the occasional overdose, a tourniquet above the injection site will usually quickly diminish the side effects.

If the sting occurred on an extremity, the epinephrine would best be given in a different extremity. An additional 0.10 cc. dose can be injected directly into the site of a sting in order to decrease systemic absorption of the venom. A tourniquet can be applied proximal to the sting and loosened momentarily every ten minutes. Ice applications to the site of the sting may be beneficial in slowing venom absorption.

In families where hypodermic injections cannot be routinely given, other medications should be made available, realizing they are all inferior to aqueous adrenalin. This could be a liquid such as Ephedrine or Isuprel Elixir, a pressurized dispenser containing epinephrine (Medihaler-Epi) or Isufranol Tablets. We prefer Isufranol in this instance as a slower acting, but more practical solution, since it is easily carried with the patient at all times and may be readily self-administered. It may be given with adrenalin. Isuprel alone, while quite effective in relieving asthma, may theoretically aggravate shock through its beta adrenergic action.[3]

Commercial kits containing a premeasured dose of epinephrine may be recommended. Additions to these kits that may be of benefit in selected patients include antihistamines, Ephedrine Tablets, a tourniquet and a preloaded syringe of Dexamethasone (Decadron).

Susphrine injections may be helpful later for their continued adrenergic action over a four to six hour period. Susphrine should not be given until after adequate response to aqueous epinephrine has been established. Highly sensitive patients should make immediate arrangements to report to the nearest medical facility in case additional treatment is needed.

In the case of stings by a bee, the stinger should be carefully flicked out without squeezing the attached venom sac. Local injections of 1% lidocaine (Xylocaine) with epinephrine may be helpful in diminishing the pain at the site of delayed reactions.[10]

(2) Intermediate Treatment—If the above measures have not been sufficient to terminate the reaction by the time the patient presents to a physician, additional drugs are needed, depending on the findings at that time. If hypotension is observed, intravenous fluid therapy would be indicated with a pressor drug such as levarterenol, metariminol or ephedrine. If shock is present, intravenous medications must be given since subcutaneous and intramuscular absorption is markedly reduced. If the reaction is characterized by especially severe asthma and shock is absent, intravenous aminophyllin may be given to patients not responsive to epinephrine if blood pressure is not low. The usual adult dose is up to 0.50 Grams in 20 ml. of solution over ten minutes. The injection should be terminated if the patient develops symptoms of toxicity (nausea, vomiting, dizziness, vascular collapse). An appropriate child's dose would be 4 mgs. per kilogram.

Antihistamines may be considered if a patient does not respond to epinephrine and if shock and asthma are not the primary manifestations. Antihistamines may be quite helpful for skin reactions and delayed swelling, but do not act rapidly enough to save a life. Intravenous antihistamines often give dramatic relief of pruritis, and more importantly may help relieve glottic edema. An adult dose of Benadryl might be 50 to 100 mgs. (5 to 10 mls.) over a three minute period. An appropriate child's dose would be 1 mg. per kilogram intravenously. Chlorpheniramine (Chlor-Trimeton) may be used in doses of 5 mgs. for a small child and 10 mgs. for an adult.

It is uncertain whether intravenous corticosteroids act rapidly enough to be of help in some of the quicker fatalities since they are not potent in protecting animals against anaphylactic shock. However, a rapidly acting intravenous steroid is probably indicated for all severe reactions as soon as adequate epinephrine has been given. An injection intramuscularly for any severe reaction would seem desirable and it is often useful to continue the steroid orally for a few days, especially if massive swelling is a problem. Intravenous hydrocortisone or Prednisolone are recommended. Dexamethasone is also frequently used.

(3) Long-term Treatment—Every person who has survived any degree of a generalized insect sting reaction should have long-term hyposensitization. After two or three years of injections, The Registry of Stinging Insect Reactions (maintained by the Insect Committee of The American Academy of Allergy) indicates a highly signifi-

cant difference in the frequency and severity of reactions to subsequent stings in hyposensitized patients as compared to the reactions from the control group who did not receive the injections. Ninety percent (90%) of treated patients showed less severe reactions upon being stung again.[8] Experience suggests that patients may be protected after the first few months of injections, but it is important that they continue to carry out avoidance measures and carry medication with them at all times, since it is not possible at the present time to identify those patients who have adequate protection unless they have been stung.

Avoidance is the preferred method for managing most allergy problems. Insect sting allergy is no exception. Avoidance measures should be emphasized to the patients, even though they are undergoing hyposensitization. Some instructions for insect sensitive persons are outlined in Table I.[1,2,6]

Selecting the Patient for Hyposensitizing Injections

As is usual for other allergic diseases, a careful history is most important. We advise all patients who have had any type of widespread or systemic allergic response immediately following a hymenoptera sting to undergo treatment. This would include reactions devolving any degree of generalized urticaria, asthma, syncope or shock. Local pain and some swelling are normal responses and do not constitute an indication for insect extract injections. A notable exception might be the extreme swelling of an entire extremity or progressive swelling of an extremity with each subsequent sting. There seems to be a growing tendency to consider injection therapy for patients with unusually large local reactions. Special mention should be made of the fact that stings on the face, lips, eyelids, and certain other soft tissues might produce rather marked local swelling and do not necessarily indicate an abnormal degree of sensitivity.

The age and occupation of the patient may influence the decision to begin immunotherapy. The results are so gratifying and a fatality so unfortunate because of failure to give treatment, that one is often justified in advocating a course of injection therapy in border-line cases.

Selection of the patient who should receive treatment is sometimes complicated by anxious patients who have been told by friends the need for prophylactic injections. Prophylactic injections for insect sting reactions are not indicated for the general population. A fright reaction following a sting may be difficult to distinguish from a true allergic reaction, but dyspnea, urticaria and angio-edema are absent.

Skin tests are not very helpful in reflecting the degree of clinical sensitivity of a patient, but they may aid in estimating the starting dose of the insect extract. It is best to wait two weeks after the patient has been stung before performing these tests, since a refractory period may exist. Tests may be uniformly negative even with definite clinical hypersensitivity to hymenoptera stings.

Injections of insect antigens are carried out just as they are with other programs of hyposensitization. Usually if the insect season is near at hand and if there is a pressing need to achieve the "desensitization" rapidly, injections can be given twice weekly while the dose is being increased. The usual precautions are observed and the patient is kept 20 minutes in the office after each injection. After a maintenance dose is reached, the interval between injections can usually be extended to two weeks and later to three and even four weeks.

The recommended duration of the injections is still a matter of major uncertainty and is currently under study.[8] Tentatively, three years of treatment is suggested for the average patient, but it may be advisable to maintain the injections indefinitely in patients who have experienced allergic shock.

Hyposensitization with emulsified insect allergens (repository)[11] and Allpyral insect antigen[12,13] have also been reported to be effective. It should be pointed out, however, that much less experience has been accumulated with these forms of treatment. Regardless of the type of injection given, treatment is usually given with a mixture of antigens derived from the whole bodies of bees, wasps, hornets and yellow jackets. There seem to be antigens in common, as well as specific antigens peculiar to each insect. A person sensitive to hornet may or may not have an allergic reaction upon being stung by a yellow jacket and vice versa. Positive identification is frequently not made. In such cases, a mixed insect extract is usually recommended.[14]

Summary

The problem of insect sting hypersensitivity is briefly reviewed with emphasis on a threefold

therapeutic approach: (1) Avoidance of stings; (2) emergency treatment of stings; and, (3) hyposensitizing injections. The indications for beginning hyposensitizing injections are outlined. Aqueous epinephrine in adequate dosage remains the drug of choice for emergency treatment.

TABLE I

INSTRUCTIONS FOR INSECT SENSITIVE PERSONS

1. Your physician has provided you with medication for emergency use in case of a sting and instructed you in its use. Carry your medication with you at all times.
2. Look to see if the insect (a bee) has left a stinger in the skin. It will look like a black thorn or splinter. Carefully remove it using a pin or pointed knife to flick it from the skin. Try to get the stinger out without squeezing more venom into the skin.
3. Apply ice or cold compresses to the site of the sting.
4. Even though it may prove unnecessary, it is best for the patient to be taken to the nearest medical facility. In a strange area, the telephone operator can advise you of its location.
5. Keep an aerosol insecticide in the kitchen, glove compartment of the car and nearby when you working outdoors.

DO NOT DO THE FOLLOWING

1. Do not use scented preparations when going outdoors (hair tonic, after-shave lotion, hair spray, deodorant, perfume and bath powder). Floral odors especially attract bees and wasps.
2. Avoid wearing dark clothing and floral prints. White is said to be the least insect-attracting color.
3. Do not wear loose fitting clothing such as head scarves and billowing skirts, as an insect may become entrapped in these.
4. Do not go barefoot or wear sandals outdoors.
5. Avoid wearing fresh leather or highly polished leather.
6. Activities with particular risk are tampering in any way with wasps nests or yellow jacket burrows, mowing the yard, cutting flowers, trimming hedges or shrubs or painting a house. Wasps may also nest around fences or boat docks. Handling trash and garbage cans is particularly hazardous. Insects are unusually prevalent in clover fields and around picnic grounds. Jerky or fast movements should be avoided when insects are near.

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Steroid-Induced Lipemia

J. D. Bagdade, D. Porte, Jr., and E. L. Bierman (4435 Beacon Ave S, Seattle)

Arch Intern Med 125:129-134 (Jan) 1970

Marked hypertriglyceridemia and lipemic (lactescent) plasma associated with symptomatic diabetes was observed in two patients receiving high-dose corticosteroid therapy for connective tissue disorders. Studies during the course of drug therapy in one patient revealed the following: abnormal accumulation of dietary fat (chylomicrons); decreased postheparin lipolytic activity, which suggested that tissue lipoprotein lipase levels were low and was consistent with impaired triglyceride removal; glucose intolerance with reduced insulin responses during oral glucose tolerance tests; and complete reversal of these abnormalities as the steroid dosage was decreased. Prolonged high-dose glucocorticoid treatment may compromise pancreatic insulin reserve sufficiency to cause a state of chronic insulin insufficiency and a reversible form of fat-induced lipemia identical to that observed in poorly controlled diabetes mellitus.

DEPARTMENT OF
PEDIATRICS
UNIVERSITY OF ARKANSAS
SCHOOL OF MEDICINE

Grand Rounds

Total Anomalous Pulmonary Venous Connection

Discussor — William T. Dungan, M.D.*
Participant — Jon Hall, M.D.**
Editorial Director — Jerry G. Jones, M.D.***

Case Presentation

Present Illness

DR. HALL: This 5-month-old Negro male was born to a gravida 4, para 3, 38-year-old female without peripartum complications. Birth weight was 8 lbs. 6 oz. The infant was discharged in good condition at 3 days of age and remained well until 3 weeks when he developed diarrhea and penumonia. He was hospitalized for two weeks at that time and has since required visits to his family physician every 3 to 7 days because he "didn't breathe right and got diarrhea easily." One month prior to this admission, he developed a persistent cough and his mother noted that his lips turned dark when he cried. He was taken to a pediatrician who felt that he had congenital heart disease and referred him to the Medical Center. He was admitted on 4-25-70.

Physical Examination

This was a small, tachypneic Negro male who showed moderate retractions and flaring of the alae nasi with respirations. Temperature was 99.4°, Pulse 160, Respirations 44, Weight 5.4 kg. (50% for 2½ mos.), Height 63 cm. (50% for 4 mos.), and head circumference 40.5 cm. (50% for 2½ mos.). A precordial heave was apparent. A grade 1 systolic murmur was audible at the second left intercostal space. The second sound at the base was split. The lungs were clear. The liver was palpable 3 cm. below the right costal margin. The mucous membranes and extremities were mildly cyanotic but clubbing was absent.

Laboratory Data

Hemoglobin was 12.8 gm% and the Hematocrit 43%. Differential was not remarkable. Urinalysis was within normal limits. A slide for fluorescent antibody to pertussis was positive.

Hospital Course

The child was admitted with the diagnosis of cyanotic congenital heart disease and congestive heart failure. Digitalization was begun. He received pertussis immune gamma globulin 1.5 cc. IM daily for 4 days. On 4-30-70 a cardiac catheterization was performed which confirmed the clinical impression of total anomalous pulmonary venous connection. The infant was then placed on maintenance Digoxin and discharged to be followed in the Pediatric Cardiac Clinic.

Discussion

DR. DUNGAN: The primary presenting problems were recurrent respiratory infections, tachypnea, and failure to thrive. On admission he was tachypneic, and he had hepatomegaly and cardiac enlargement, which indicate con-

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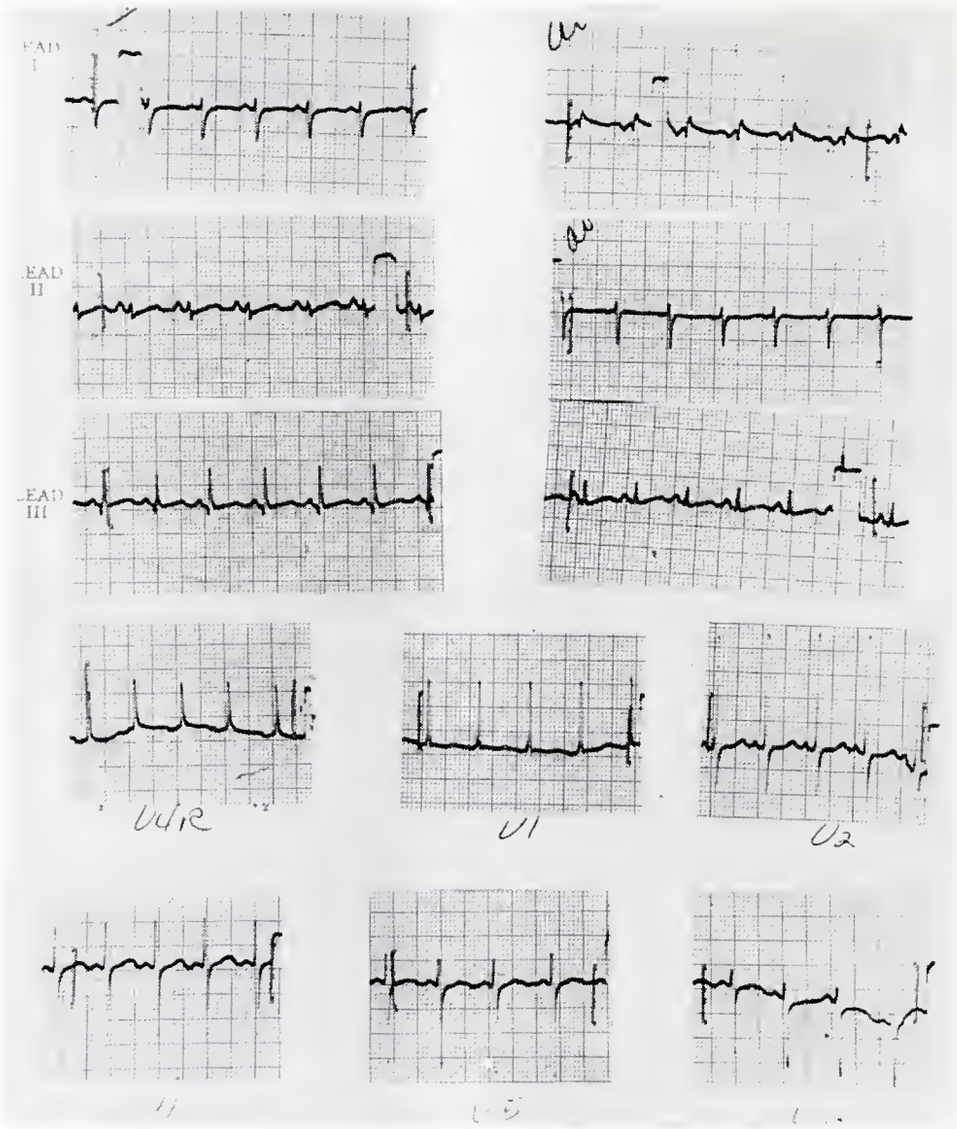


Figure I
Electrocardiogram of patient.

gestive heart failure. He was mildly cyanotic without clubbing. A grade one systolic murmur was audible at the cardiac base, and the second sound in the pulmonary area was prominently split. Electrocardiogram revealed right ventricular hypertrophy (Fig. I). We will discuss his X-ray findings later. His hematocrit was 43%, which is probably a little high for the usual 5-month-old infant that is admitted to our wards.

I have divided *congenital heart defects* into two groups—acyanotic and cyanotic (Table I). This classification has some drawbacks in that

TABLE I
CLASSIFICATION OF CONGENITAL HEART DISEASE

Acyanotic		Cyanotic	
Pulmonary Flow Equals Systemic Flow	Pulmonary Flow Greater Than Systemic Flow	Pulmonary Flow Less Than Systemic Flow	Pulmonary Flow Greater Than Systemic Flow
Pulmonary Stenosis	Patent Ductus Arteriosus	Tetralogy of Fallot	Single Ventricle or Atrium
Aortic Stenosis	Ventricular Septal Defect	Tricuspid Atresia	Truncus Arteriosus
Coarctation of Aorta	A - V Canal	Ebstein's Anomaly	Total Anomalous Pulmonary Venous Connection
	Atrial Septal Defect	Severe Pulmonary Stenosis or Artesia with Intact Ventricular Septum	Hypoplastic Left Heart
			Transposition of Great Vessels

a child who has an acyanotic defect presenting with congestive failure, perhaps complicated by a pulmonary infection, may appear cyanotic. The congestive heart failure, by causing venous stasis and increased arterial-venous oxygen difference, may cause acrocyanosis. However, if the arterial saturation is normal, the mucous membranes will be pink. Also, if the infant has pneumonia or a huge left-to-right shunt, he may have pulmonary venous unsaturation. However, once the child is out of failure and the pneumonia has cleared, it becomes apparent that he is not cyanotic. On the other hand, some of the children who are in the cyanotic category, if their arterial unsaturation is not marked, may not be obviously cyanotic. It takes about 5 grams of unsaturated hemoglobin in the capillaries to produce obvious cyanosis. Normally there are 2 to 3 grams of unsaturated hemoglobin in the capillary blood, so it takes another 2 to 3 grams of unsaturated hemoglobin in the arterial blood to add up to the five grams that it takes to produce obvious cyanosis. A patient with an arterial saturation of 85% may not appear cyanotic, particularly if he is relatively anemic, as the absolute level of hemoglobin is important. With these drawbacks in mind, I still think this is a useful classification.

Today, we are presented with a child who is mildly cyanotic. He has a big heart and increased pulmonary vascular markings. I have divided the *cyanotic group* of congenital heart defects (Table I) into two categories, as there are two reasons that children with congenital heart defects have central cyanosis. One is obstruction of pulmonary blood flow with a proximal right-to-left shunt. The tetralogy of Fallot is the most common anomaly of this type with obstruction of pulmonary flow at the pulmonary outflow tract and a right-to-left shunt through a ventricular septal defect. With tricuspid atresia, the obstruction to pulmonary flow is at the tricuspid valve, and the proximal right-to-left shunt is at the atrial level. There are several other defects in this category, such as severe pulmonary stenosis or atresia with an intact ventricular septum and Ebstein's malformation, but I will not dwell on these because these patients have decreased pulmonary vascular markings.

The other cyanotic group has pulmonary flow usually greater than the systemic flow. This is the group of patients that I classify as having a common mixing chamber type of defect. The reason they are cyanotic is that they have a chamber where all the blood, both the pulmonary venous return and the systemic venous return, is mixed together. An example of this type of defect is a single ventricle, or a common atrium. If the pulmonary artery is of good size without pulmonary stenosis, as the pulmonary resistance falls after birth there is an increasing pulmonary blood flow. The patients with obstruction to pulmonary flow frequently have a problem with hypoxia, and they seldom develop congestive heart failure. They usually have small hearts and diminished pulmonary vascular markings. Because patients with obligatory admixture defects usually have increased flow through the lungs, their arterial saturation is not markedly reduced and cyanosis is mild. Their primary problem is not hypoxia but congestive heart failure, because of the large volume overload. Patients with transposition of the great arteries often have problems with hypoxia and congestive failure. They develop big hearts and increased pulmonary vascular markings. The other defects that fall in the category of admixture lesions are persistent truncus arteriosus, the hypoplastic left heart syndrome and total anomalous pulmonary venous connection. The prototype of the hypoplastic left heart syndrome is aortic atresia, in which there is an obligatory left-to-right shunt usually at the aterial level and the common mixing chamber is the right atrium. Blood can only reach the systemic circulation through a patient ductus arteriosus.

The patient we are discussing today has total anomalous pulmonary venous connection. Here, the common mixing chamber is the right atrium. All the pulmonary veins, instead of connecting to the left atrium, drain directly or indirectly to the right atrium. Obviously there has to be a communication between the left and the right heart for life to be sustained and this is usually at the atrial level, either an atrial septal defect or a patent foramen ovale. The systemic output is maintained by blood which shunts from the right atrium to the left atrium. Most of the venous return goes back around the lungs. These patients' problem is not primarily hypoxia but a volume overload on the right heart and congestive heart failure.

Murmurs are not as helpful in the diagnosis of the cyanotic group of congenital heart defects as the acyanotic group. Most of the acyanotic patients have rather typical murmurs, which

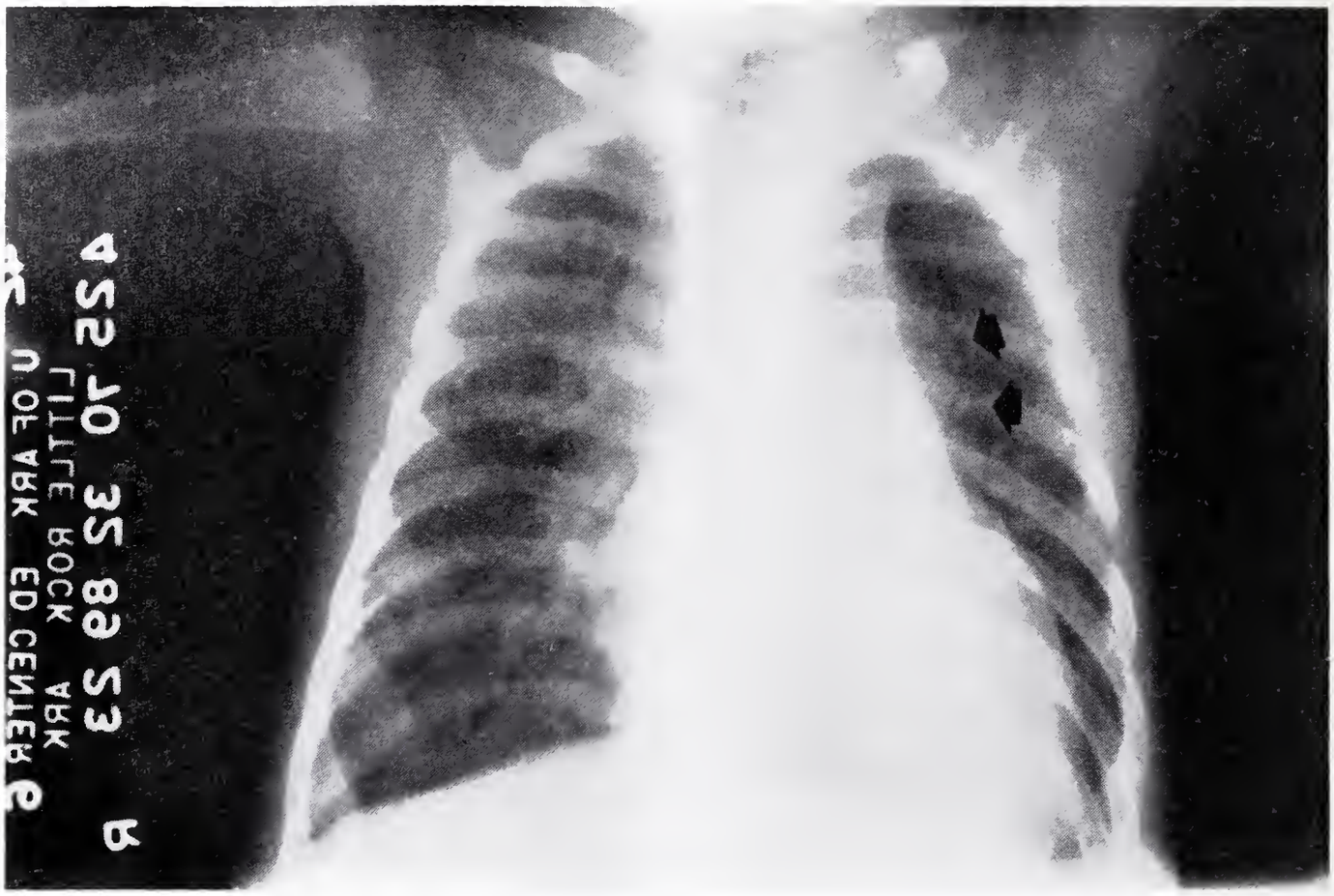
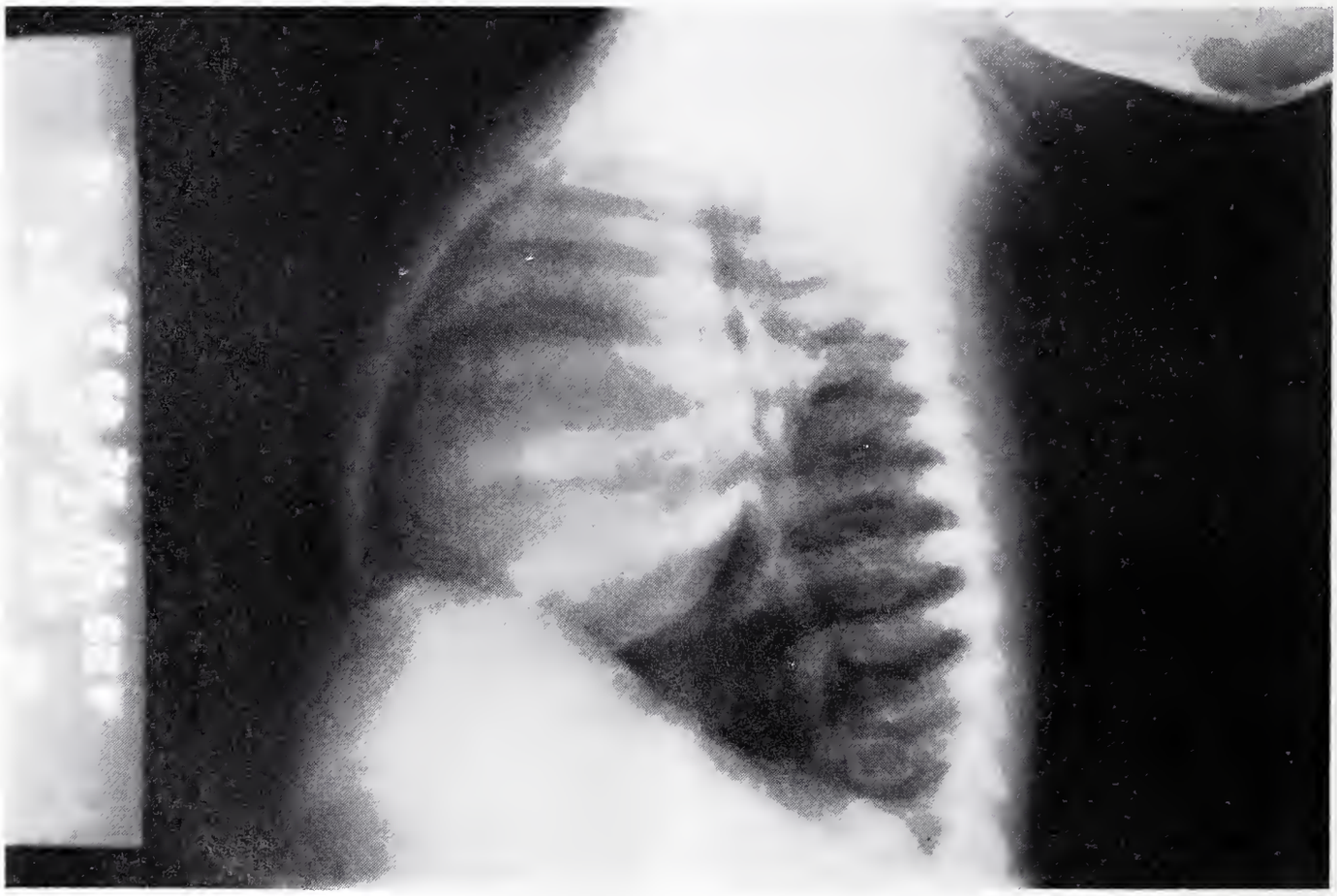


Figure 2
Chest roentgenograms of patient.



give one a clue as to the diagnosis. On the other hand, cyanotic patients may or may not have murmurs.

The *electrocardiogram* is somewhat more helpful, but again it is not too helpful in the diagnosis, because almost all of the cyanotic patients have right ventricular hypertrophy or combined ventricular hypertrophy. The major exception is tricuspid atresia, in which cyanosis is associated with left ventricular hypertrophy.

Today we are presented with an infant who is mildly cyanotic and is in congestive heart failure. He has a big heart and increased pulmonary vascular markings. Some of the house staff felt the diagnosis was transposition of the great arteries because transposition certainly is the most common cause of cyanosis and congestive heart failure in infancy. The points against transposition include first his age. If there is not a ventricular septal defect with transposition, usually the patient is markedly cyanotic in early infancy and will develop congestive heart failure in the first few weeks of life. Also against transposition is the fact that he was only mildly cyanotic, with an arterial oxygen saturation of 82%. Usually patients with transposition without an associated ventricular septal defect will have a saturation more in the order of 40%.

The chest X-ray (Fig. 2) was the major clue in the diagnosis of the patient presented today. His chest X-ray reveals a markedly enlarged cardiovascular silhouette and increased pulmonary vascular markings. I want to focus your attention on the density in the left upper lung field indicated by arrows. At first glance, one would say this is thymus. However, this density is characteristic of the most common type of *total anomalous pulmonary venous connection*, in which all the pulmonary veins drain to a common pulmonary vein which then connects to a remnant of the left superior vena cava, the left innominate vein, the superior vena cava, and the right atrium. This density becomes more striking as the child gets older, with a more typical figure of "8" or "snowman" appearance. The angiocardiogram confirms this diagnosis (Fig. 3). Contrast material can be seen in the anomalous vein. Cardiac catheterization reveals the expected increase in oxygen saturation in the left innominate vein (Table 2). From the right atrium out, all the saturations are essentially the same. The pulmonary artery saturation is actually some-

Figure 3
Angiocardiogram of patient.

TABLE 2
CARDIAC CATHETERIZATION DATA

Catheter Position	Oxygen Saturation	Pressure (mm.HG.)
Inferior Vena Cava	72%	
Right Atrium	87%	6
Superior Vena Cava	91%	
Innominate Vein	90%	
Left Atrium	83%	6
Right Ventricle	85%	55/0-6
Pulmonary Artery	86%	50/20
Femoral Artery	83%	80/50

what higher than the femoral artery saturation. The inferior vena cava return is preferentially shunted from the right atrium to left atrium, whereas blood that returns from the superior vena cava primarily flows through the tricuspid valve. He has mild elevation of left and right atrial pressures, which are equal, indicating an adequate interatrial communication. He has moderate elevation of the pulmonary artery pressures.

Anomalous pulmonary venous connection may be either partial or complete. *Partial* pulmonary venous connection is when one or more, but not all, pulmonary veins connect either to the right atrium or to a systemic vein. These patients have hemodynamics similar to patients with atrial septal defects. Partial anomalous pulmonary venous return is often associated with an atrial septal defect. In *total* anomalous pulmonary venous connection, all pulmonary veins either directly or indirectly drain to the right atrium. These patients have obligatory mixing at the right atrial level.

The next slide (Table 3) indicates that total anomalous pulmonary venous connection accounts for 2% of congenital heart defects in this series. The next slide (Table 4) depicts causes of heart failure in order of decreasing frequency in infants with congenital heart defects. Notice that some of the more common defects, such as atrial septal defect and tetralogy of Fallot, do not commonly cause congestive heart failure in infancy.

Embryologically this anomaly can be explained by failure of a connection to develop between the pulmonary portion of the splanchnic plexus and the atrial portion of the heart. Instead, there is persistence of a more primitive connection between the lung bud and the cardinal venous system or the vitello-umbilical venous system.

TABLE 3
INCIDENCE OF VARIOUS CONGENITAL CARDIAC DEFECTS*

Defect	Per Cent of Total Group	Prevalence in Population Birth—14 Yrs.
Ventricular septal defect	22	1:4000
Patent ductus arteriosus	17	1:5500
Tetralogy of Fallot	11	1:8500
Transposition of great vessels	8	1:11,000
Atrial septal defect	7	1:13,500
Pulmonary stenosis with normal aortic root	7	1:14,500
Coarctation of aorta	6	1:16,000
Aortic and subaortic stenosis	4	1:21,000
Ventricular septal defect with pulmonary hypertension	3	1:33,000
Tricuspid atresia	3	1:35,000
Atrioventricularis communis	2	1:47,0000
Aortic atresia	2	1:39,000
Single ventricle	2	1:50,000
Total anomalos pulmonary venous drainage	2	1:55,000
Endocardial fibroelastosis	1	1:68,000
Pulmonary atresia with normal aortic root	1	1:70,000
Persistent truncus ateriosus	Less than 1	1:150,000

* Keith, J. D.: Incidence of Various Congenital Heart Defects at the Hospital for Sick Children. In Keith, J. D., Rowe, R. D., and Vlad, P.: *Heart Disease in Infancy and Childhood*. New York, MacMillan Co., 1958, p. 3. Courtesy of MacMillan Company.

TABLE 4
CAUSES OF HEART FAILURE IN ORDER OF FREQUENCY*

Transposition of the great vessels
Coarctation of the aorta
Ventricular septal defect
Aortic atresia
Endocardial fibroelastosis
Common A-V canal
Pulmonary venous anomalies
Patent ductus arteriosus
Myocarditis
Single ventricle
Pulmonary stenosis

* Keith, J. D.: Congestive Heart Failure, *Pediatrics*, 18:491, 1956. Courtesy of American Academy of Pediatrics, Evanston, Illinois.

The most popular classification of the types of this malformation is that of Darling and Associates[1] (Table 5). The supracardiac type with connection to a remnant of the left superior vena cava is the most common, as in the case presented today.

The prognosis is poor, particularly if there is pulmonary venous obstruction, and many of these patients die in early infancy. However, without pulmonary venous obstruction and with

an adequate interatrial communication, the prognosis is better.

Definitive diagnosis is important as corrective surgery is possible utilizing cardiopulmonary bypass. The operation consists of creation of an anastomosis between the common pulmonary venous trunk and the left atrium, closure of the atrial septal defect, and obliteration of the site of anomalous connection.

REFERENCES

1. Darling, R. C., Rothney, W. B. and Craig, J. M.: Total Pulmonary Venous Drainage Into the Right Side of the Heart; Report of 17 Autopsied Cases Not Associated with Other Major Cardiovascular Anomalies. *J. Lab. Investigation*, 6:11, 1957.

TABLE 5
CLASSIFICATION OF TOTAL ANOMALOUS PULMONARY VENOUS CONNECTION

TYPE 1:	Supracardiac level
	Remnant of left superior vena cava
	Right superior vena cava
TYPE 2:	Cardiac level
	Right atrium
	Coronary sinus
TYPE 3:	Infracardiac level
	Portal vein
	Ductus venosus
	Inferior vena cava
	Hepatic vein
TYPE 4:	Multiple sites

Patterns of Recurrent Disease in Breast Cancer

J. Bruce, D. C. Carter, and J. Fraser (Univ of Edinburgh, Edinburgh)

Lancet 1:433-435 (Feb 28) 1970

The pattern of recurrent disease had been studied in 423 "potentially curable" patients (clinical stages I and II) undergoing simple mastectomy and radiotherapy as the primary treatment of breast cancer. Local recurrence alone is rare, occurring in only 4% of patients. Distant metastases are common (49%), and in those patients with both types of recurrence (26%) the local and the distant lesions appeared synchronously. Clinical staging in its present form is not a reliable guide to treatment and should probably be abandoned. With newer methods of assessment, conventional forms of local treatment may still retain a place in the therapeutic spectrum once clinically occult distant disease can be easily and accurately detected.

Undifferentiated Myeloid Leukemia in Two Sisters

D. Oberschulte-Beckmann and R. Wildhack (Allegemeines Krankenhaus Rissen, Hamburg, West Germany)

Deutsch Med Wschr 95:623-626 (March 20) 1970

Within 11 years of one another two sisters developed myeloid leukemia of the undifferentiated cell type, at about 55 years of age. Combined corticosteroid and 6-mercaptopurine in both instances caused remission after about 110 days. Shortly thereafter a recurrence developed and could not be influenced therapeutically; the sisters died 251 and 311 days after the first hospital admission. At postmortem there was leukemic hyperplasia of all internal lymph nodes, pharyngeal nodes, and all lymphatic organs of the intestinal tract. In one sister the combined treatment had caused a remission as early as the 33rd day. In the second one, at first receiving only 6-mercaptopurine, regeneration of granulocytes and platelets occurred only when corticosteroids had been administered after the 30th day.

Late Metabolic Sequelae of Vagotomy and Gastroenterostomy

E. J. Wheldon, C. W. Venables, and I. D. A. Johnston (Royal Victoria Infirmary, Newcastle-upon-Tyne, England)

Lancet 1:437-439 (Feb 28) 1970

More than 15 years after vagotomy and gastroenterostomy 255 patients were investigated. Weight loss of more than 6 kg was observed in 32.5% of men and 60% of women. Hemoglobin levels below 90% were found in 43.5% of men and below 80% in 84% of women; this anemia was iron deficient. Metabolic complications seemed to be more common in the women than the men. No radiological evidence of bone disease was seen. Four per cent had a calcium level below 8.5 mg/100 ml and 6.3% had a raised alkaline-phosphatase level. Pulmonary tuberculosis was found in 7% of patients.

ELECTROCARDIOGRAM OF THE MONTH

AGE: SEX: Male BUILD: BLOOD PRESSURE:

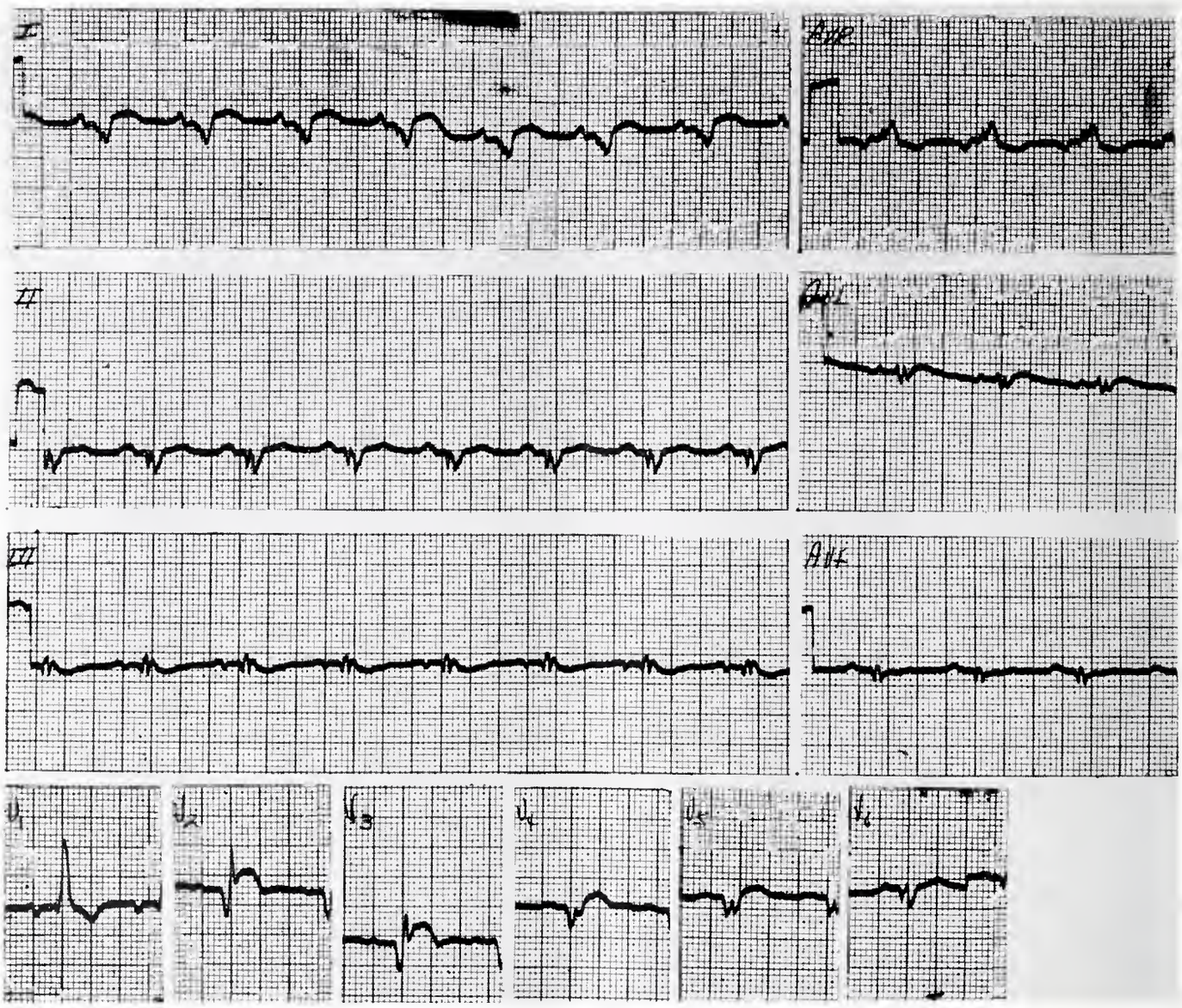
CARDIAC DIAGNOSIS:

OTHER DIAGNOSIS:

MEDICATION:

HISTORY: Male; no clinical information available.

See Answer on Page 114



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 81

T. J. Swaim, M.D.

HISTORY: A 55-year-old, white male, came into the hospital complaining of a painful swollen right leg and gave a past history of thrombophlebitis of the right lower extremity. Because of this history, a lung scan was obtained.

CASE NO 2
FEB 9, 1970
RIGHT
PA SCAN

Rubella Progress in Arkansas

Since the licensure of the rubella vaccine in June 1969, the Public Health Service has been awarding rubella control funds and vaccine to State and local health departments throughout the nation. Some 93 percent of the population is represented under this program. Rubella activities are now under way in many communities throughout the United States, and other States and localities are planning and organizing rubella programs.

The new rubella vaccine is both safe and effective. It is expected that one dose will provide an individual with lifetime protection against the disease.

Rubella, or German Measles, occurs in epidemic proportions at intervals of six to nine years. The last epidemic occurred in 1963-64; thousands of Arkansas residents were among the more than twelve million U. S. citizens that became infected. The economic cost of the country's last epidemic alone exceeds two billion dollars; the cost in terms of human suffering is incalculable.

In the last epidemic an estimated 65,000 women contracted rubella during early pregnancy, and the effect of the virus upon the fetus was tragic. Thousands of babies were born deaf, blind, retarded, crippled and with heart trouble. Thousands were born dead and in more than 5,000 instances therapeutic abortions were performed.

Estimates of the number of Arkansas children afflicted by the 1964-65 rubella epidemic have been as high as 75. A search for Arkansas children who were born blind and deal as a result of the epidemic has already yielded 36 victims.

Based on the cyclical character of rubella outbreaks, we may expect another large increase in cases in the early 1970's, unless large-scale immunization takes place immediately.

The rubella vaccine is most useful for children between one year of age and puberty. At the beginning of a rubella control program, children in kindergarten and the early grades of elementary school might deserve priority because they commonly are the major source of spreading the virus. A history of rubella illness usually is not reliable enough to exclude children from being immunized.

Since preventing exposure of the pregnant woman is the main object of rubella control, the best means of protection is to reduce the likelihood of the mother's becoming infected.

The best can be done by eliminating the major source of infection for pregnant women—by vaccinating children, who commonly are the major source of the spread of the rubella virus in the community.

Arkansas was one of the first States to launch a mass rubella immunization program. As of this writing, fifteen of Arkansas' seventy-five counties have completed county-wide mass rubella immunization programs, in which approximately 35,000 resident children have received rubella vaccine.

It is estimated that an additional 40,000 children will have received the vaccine in nine other Arkansas counties by the time school is out this year.

The effort to eliminate rubella as a threat to unborn children is a challenge which the Arkansas State Department of Health hopes to meet with the help of county medical societies and private physicians throughout the State.

EDITORIAL

The Second Messenger

Alfred Kahn, Jr., M.D.

Sutherland, Robison, and Butcher (Circulation, Vol. 38, p. 270, Feb. 1968) have reviewed some of the pertinent information about cyclic AMP (adenosine 3',5'-monophosphate) which has been dubbed the second messenger.

In brief, they report that certain chemical substances as hormones travel from their cell of origin to the cell to which they affect. The affected cell has on or near its surface an enzyme adenyl cyclase, which the hormone (the first messenger) acts upon. Adenyl cyclase in turn stimulates adenosine triphosphate to break down to adenosine monophosphate (cyclic AMP) this in turn becomes the second messenger and acts intracellularly to carry the message so to speak, to the intracellular system to be stimulated into activity. The hormone is thus the first or extracellular messenger and cyclic AMP is the second or intracellular messenger.

Robison states that the essential enzyme adenyl cyclase, which is necessary to form cyclic AMP from adenosine triphosphate has not been purified despite many efforts to do so, and despite its wide distribution in mammalian cells. A form of adenyl cyclase has been extracted and purified from bacteria but it does not respond to mammalian hormonal stimulation. Another enzyme which is partially responsible for the amount of cyclic AMP in the cell is phosphodiesterase, which changes cyclic AMP to 5-AMP; this enzyme is known to be inhibited by certain drugs as puromycin, etc., and it is suggested that this is the pharmacological basis of these drugs.

Some of the hormones known to be or suspected of being mediated by cyclic AMP are: catecholamines, glucagon, ACTH, L.H., angiotensin, vasopressin, TSH, MSH, serotonin, gastrin, etc.

Sutherland states that the lipolytic response and steroidogenic response of cyclic AMP are well established. By the lipolytic response is meant the breakdown of triglycerides to glycerol and fatty acids; this process is known as lipolysis. In this lipolytic study, adenyl cyclase was isolated, and it was stimulated by ACTH, glucagon, and adrenalin. Furthermore, in fat cells incubated with adrenalin cyclic AMP and lipolysis were increased; and caffeine seemed to potentrate this reaction. Insulin lowers cyclic AMP and has an antilipolytic effect; prostaglandins also decreased cyclic AMP.

The steroidogenic response has been studied with ACTH which the authors state reacts specifically with adenyl cyclase system and this in turn causes a rise in cyclic AMP. It is not known how cyclic AMP specifically causes the formation of the steroid hormone, however, both phosphorylation and the release of protein are both possibilities.

Sutherland has related cyclic AMP to the cardiovascular system. The beta adrenergic receptors are said to be a possible part of the adenyl cyclase system and thus it is pointed out that catecholamines may stimulate the adenyl cyclase system and this in turn might account for an increased cyclic AMP which in turn would stimulate the positive inotropic effect, positive chronotropic effect and vasodepressory effect from sympathetic stimulation. It is also that the alpha receptor effect may be due to a decreased cyclic AMP. It is of interest that large amounts of glucagon seems to produce an inotropic effect similar to adrenalin. Xanthines also stimulate the inotropic effect through increasing cyclic AMP. Exactly how the cyclic AMP affects actin, myosin, and other substances relating to muscle contraction to strengthen the contraction is un-

known; cardiac glycosides do not work by increasing cyclic AMP.

The clinical implications are discussed by Sutherland under two headings: diagnosis and therapy. Generally from a diagnostic point of view, one would like to know if in diseased tissue cyclic AMP and the substances which form it and destroy are present in normal amounts and sensitive to stimulation and inhibition; this is not really worked out.

Therapeutically, they suggest the important approaches are threefold: stimulation or inhibition of adenyl cyclase which forms, cyclic AMP, stimulation or inhibition of phosphodiesferase which is responsible for removal of cyclic AMP, and lastly, by passing the cyclic AMP cycle. Sutherland cites some examples in this area, such as the use of isoproterenol and theophylline in bronchial asthma; they tend to increase cyclic AMP in a situation where the disease has caused a decrease.

This important review provides an interesting, and easy to understand, insight into a technical field far removed from the literature to which most physicians are exposed. Yet, the fundamental biochemical importance of this work, so well reviewed here, cannot be overstated.

Organized Medicine — A Crucial Choice*

F. M. Henderson, M.D.**

Two thousand three hundred and sixty-nine years ago on an Athenian hill, three issues came to judgment: the search for on-going truth versus stagnant orthodoxy; belief in a Supreme God versus a multitude of dieties; and tolerance versus intolerance. When the Athenian people condemned Socrates because of his ideals, they placed themselves on trial forever.

Today, society is judging the physician and organized medicine; charging rigid orthodoxy, intolerance and refusal to progress. Perhaps time will find our critics, too, are on trial.

Every age, thank God, is beset with controversy. Without it there would be no change, no growth, no fulfillment of wisdom. And, there is a soundness in the generation bold enough to openly question tradition. Again mankind is in one of its moods of shifting its outlook. The compulsion of tradition has lost much of its force.

If, indeed, tradition is impotent in our day, we face a most valid question: "How can organized medicine help me serve man?" Two weeks ago a CBS commenator cynically challenged, "If history is any indicator, we cannot expect the AMA to institute any program of broad sweeping change in medical service."

History records quite the contrary. Over the years most of the significant medical changes were either designed or supported by the AMA. Through their efforts evolved the educational system that trained you and me (including enough financial support from Arkansas physicians to make available almost $400,000.00 in scholarship monies over the past nine years). Then, too, has come the present food and drug acts we use, the establishment of the Joint Commission on Accreditation of Hospitals; support for the Kerr-Mills medical aid for the aged; support for the Hill-Burton Act; initiation of the act requiring pre-marital testing for syphillis; recommendations that states register births, deaths, marriages, etc.; and support for voluntary health insurance.

True, the AMA falls short in many ways. It's cumbersome and awkward, too frequently overlooking the feelings of people. I do not like everything the AMA does, says or stands for. So, shall I howl and stomp with the same childish intolerance that lifted the hemlock to the lips of Socrates?

As things are, we accept as colleagues many people we do not like, and with whom we should not like to work in close relationship. The story of Socrates is not so much an argument for freedom of speech as it is a lesson in the need for tolerance of ideas. As educated, intelligent men you are expected to recognize prejudice and take steps to avoid it. In the book *From Dreams to Discovery*, Dr. Hans Selye says, "What we really mean by the 'unprejudiced mind' of the scientist is a mentality that has control over its numerous

* Presented at the Arkansas Medical Society banquet for 1970 graduates of the University of Arkansas School of Medicine, May 5, 1970, Little Rock.

** 1421 Cherry, Pine Bluff, Arkansas 71601.

prejudices, and is always willing to reconsider them in the face of contrary evidence."

It will not be possible, even for the AMA, to solve all the problems that beset human beings compelled to live together in the press of an expanding population. Still, we cannot take our responsibility of medical service to mankind for granted. We must make a strong effort to find and preserve those essential ideals which will give meaning and order in the modern structure.

This will not be done without change—without controversy. If, then, changes and progress are indicated, we are responsible to guide and encourage what is needed.

In the criticism of today's medicine, remember that "Any fool can see what is wrong, but can you see what is right?"* More than that, are you willing to work for that belief? You sit here tonight, on the hearthstone of sharing medicine's pride, prestige, accomplishments and weaknesses and having drawn deeply from the spring of its organization.

"Why join AMA? Why rank with organized medicine?" Because there is much to do! You don't need VISTA nor Peace Corps. Friends, if humanity and value for the body and soul of man is a virtue, then come with me.

Come face this Nation of ours and the health problems that are ours. Delivery services will change, methods of payment may change, but some aspects of medicine must *never* change. There is no pleasure without pain—there is no freedom without responsibility.

Bacon once wrote, "I hold every man a debtor to his profession: that as he doth expect to receive countenance and profit therefrom, so ought he endeavor to be a help and ornament thereto."

Organized medicine—the AMA—has given each of us a long and rich heritage, now, in this crucial hour, I hope each person here feels that from him much, very much, will be required.

* Winston Churchill.

Nephrotic Syndrome Associated With Inhaled Allergens

H. J. Wittig (Univ of Florida College of Medicine, Gainesville), and A. S. Goldman
Lancet 1:542-543 (March 14) 1970

The cases are described in which the nephrotic syndrome appeared to be associated with inhalant allergens. One such case has been reported previously. In three of these four patients there was demonstrable hypersensitivity to pollen allergens; in the fourth, mold allergy was found. Proteinuria and edema appeared to be exacerbated in all four patients with increased exposure to inhalant allergens, and in the pollen-sensitive patients the proteinuria appeared to subside while they were being treated with hyposensitization injections.

ANSWER—Electrocardiogram of the Month

RATE: 90 RHYTHM: Sinus
PR: .18 sec. QRS: 0.11 sec. QT: .30 sec.

SIGNIFICANT ABNORMALITIES:

Prolonged QRS, delay on the right.
Significant Q, extremity and precordial leads except aVR, V_1.
Abnormal RS-T evaluation, $V_{2,3,4}$.

INTERPRETATION: Abnormal

Multiple myocardial infarctions, old posterior, recent anteroseptal, anterior.

ANSWER—Radiology Case of the Month

DIAGNOSIS:

Perfusion abnormality of the right lower lung field, highly suggestive of pulmonary embolus.

DISCUSSION:

In the past few years, radioactive lung scanning, utilizing I^{131} macro-aggregated albumin, has become a valuable procedure in detecting pulmonary emboli. In pulmonary emboli, perfusion defects are often present on the lung scan when the routine chest film is normal. The changes on the scan are not diagnostic, but they are highly suggestive of pulmonary emboli. In cases difficult to diagnose, serial lung scans with appropriate laboratory tests usually are rewarding. Only 20-25% of patients who are demonstrated to have pulmonary embolus at autopsy develop the textbook picture of pulmonary embolus.

The apparent incidence of thromboembolic phenomena is also increasing. Recent investigators have shown in consecutive adult autopsies from various hospitals an incidence varying from 45-65%. This reflects not only a more careful search but also aging hospital patients. Earlier investigators reported approximately one-half this incidence of pulmonary emboli. In the past, only a small percentage of these patients have been diagnosed ante mortem. In this respect, the lung scan is indeed a valuable diagnostic aid allowing the earlier application of therapeutic modalities including anticoagulants, fibrinolytic agents, and surgery as indicated.

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2) Wagner, Henry N.: Principles of Nuclear Medicine. W. B. Saunders Company, 1968.
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MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

The Nixon Administration proposed that prepaid, closed-panel group practice health care be authorized under both Medicare and Medicaid.

The American Medical Association recommended to the House Ways and Means Committee a new Medicaid plan utilizing existing private health insurance mechanisms to replace the present program of health care assistance for the medically indigent.

Robert H. Finch, Secretary of Health, Education and Welfare, said Congress would be asked to approve legislation authorizing "health maintenance contracts guaranteeing health services for the elderly and the poor at a single fixed annual rate for each person served."

"In the case of Medicare," Finch said, "the patient will be entitled under such a contract to all of the usual Medicare services plus preventive services. The contract price will be negotiated in advance at an amount less than the Social Security Administration presently pays for conventional Medicare benefits in the locality.

"Similarly under Medicaid we are seeking authority for the states to offer to the poor the option of securing services under such health maintenance contracts. We propose to work with the individual states toward the modification of their present programs in this regard and to encourage their use of the experimental authority previously mentioned for the testing of a variety of different contractual arrangements.

"The cornerstone of this new option in federal health purchasing will be the opportunity for consumers to choose between alternatives. The ultimate goal will be to give every beneficiary of these programs a choice between obtaining services from a health maintenance organization or arranging for them in the usual way from individual doctors and hospitals. He will have the choice of withdrawing from enrollment in a health maintenance organization if he finds the service unsatisfactory. The government will have the choice of entering into arrangements with individual health maintenance organizations, subject to special standards including assurance that every contractor will serve persons of high medical risk as well as the healthy."

Earlier, HEW Under Secretary John G. Veneman told the house committee that it was planned to call the new approach under Medicare Part C—to provide all services covered under Parts A and B "plus preventive services." He estimated a saving of about $15 per person, but some committee members were skeptical that more services could be provided at less cost.

Both Finch and Veneman made clear that one of the main objectives is a fundamental change in the nation's system of health care delivery. They said states would ask to repeal existing laws restricting prepaid group practice. They said that future federal Medicaid funds might be made contingent on states eliminating "legal barriers to all forms of health delivery organizations."

"Let me conclude by saying that our broad objective is to frame an effective and reasonable approach to meet the health needs of the American people," Veneman said. "Obviously the federal government by itself cannot redirect the total health delivery system. We can, however, do our best to make sure that the vast expenditures of the federal government in the health care industry are used in a way that will contribute to the evolution of an improved, more effective, more economical system to deliver health care to our people. To the extent we are successful, we will be delivering the maximum benefit from the public funds entrusted to us. But what is equally important, we will be providing valuable support for improvement of the total health care system, public and private. In that way, we will be helping to improve the delivery of health services for all the American people."

Dr. Russell B. Roth, speaker of the AMA House of Delegates, told the House committee

that Medicaid "has demonstrated some weaknesses which badly need correction."

A new program, he said, should: "provide the Congress with a basis for reasonable predictable costs; ease the burden on the states; assure total implementation; and while maintaining a level of quality, insure that the costs of the program remain within the range of acceptability."

The program recommended by the AMA had these features:

1. Each eligible person (or family) would receive a certificate to be redeemed by a qualified health insurance company offering a health insurance policy or contract of certain basic health benefits such as hospitalization, medical care, preventive care, and diagnostic and outpatient care.

2. The premium cost for such policy or contract would be assumed by the federal government from its general revenue fund.

3. The states, freed from the expense of financing the basic costs of health care for their indigent and medically indigent residents, could provide supplementary benefits. These might include, for example, skilled nursing home care and dental services.

4. The determination that an insurance policy or contract, and the company offering same, are "qualified" would be made by a state agency which customarily has that authority. However, changes in the scope of benefits, and guidelines or standards to be used by the insurance departments in judging the company and the plan it offers, would be established by a national board appointed by the President.

5. All individuals and families below a certain level of income would be eligible to participate. A simple determination of eligibility could be made by the appropriate federal agency on the basis of income, or an even more refined criterion could be used such as tax liability. The program could require marginal needy families to participate in the expense of the premium charge by paying a small part of it, varying such participation in direct proportion to this tax liability.

6. For the lower income family there would be no deductibles and no co-insurance features.

7. To insure a high level of quality and to prevent cost escalation, the program would provide for a system of "peer review," organized and conducted in a manner to assure its success.

As to those services and charges which are within the purview of the medical profession, appropriate medical societies would be given the task of establishing a peer review mechanism that would, among other things, review individual charges and services wherever performed; review hospital and skilled nursing home admissions as to their medical necessity, and stays in hospitals and skilled nursing homes as to their continued medical necessity; and review the need for the professional services provided in the institution.

In the case of fraud or other clear intentional and gross misconduct, the peer review committee would be expected to bring charges before the appropriate licensing body.

To assist peer review committees in becoming established and in their operation, the program should provide for federal participation in the cost incurred in developing the program and its operation. To assure participation by members of the profession, those who serve on peer review committees should be held harmless from any actions or claims based on their decisions as to the necessity or quality of the services provided, or the reasonableness of the charge.

In the event that a peer review committee is not established by the appropriate medical society within a reasonable time, or although established is not functioning, the Secretary of Health, Education and Welfare in consultation with the medical society, would be empowered to appoint a committee to so act.

* * *

The American Medical Association supports the Nixon Administration's air pollution control bill (S. 3466) which would give the Department of Health, Education and Welfare power to set air quality standards for the nation.

The legislation also would provide for intensified research in air pollution and for tough enforcement procedures on the national air purity standards.

The AMA also supports accompanying legislation providing for expanded research on ways to cut auto exhaust pollution and for pollution control standards for watercraft and airplanes.

Dr. James M. Blake, a member of the AMA's Council on Legislation, told the Senate Subcommittee on Air and Water Pollution:

"For too long we have taken for granted the atmosphere, one of our natural resources; it is time now to look upon this resource as one on which the survival of man depends. . . .

"In recent years, the country has awakened to the need to control air pollution. Yet, more and more, our air becomes polluted and hazards to health increase. We must take stronger action to reverse this direction—stronger action than we have taken in the past. . . .

"It is imperative, that all elements of our society join to overcome the increasing pollution of our atmosphere. Measures which a few years ago were deemed adequate to meet the needs simply have not achieved the desired goals. New steps must be taken if we are to make any substantial headway in alleviating the problem. Accordingly, we believe that it is now necessary to provide for additional pollution controls and to make the essential financial commitment. . . ."

* * *

States must report to the Internal Revenue Service each year on total payments to providers of Medicaid services under new regulations issued by the Department of Health, Education and Welfare.

Each year, states will file Internal Revenue Service Forms 1096 and 1099 giving amounts paid to physicians, dentists, pharmacists, opticians, nursing homes, hospitals and other individuals and institutions that provide service to Medicaid patients.

States will be required to identify each individual provider of service by Social Security number, and partnerships and corporations by an employer identification number.

States also must establish procedures for verifying with recipients whether services billed by providers were actually received. Such verification may be made by spot checking.

* * *

President Nixon approved a $65 million increase in the Veterans Administration medical care budget mainly to improve services for wounded Vietnam war veterans.

An increase of $50 million was authorized in the VA's medical budget for fiscal 1971 and $15 million for the remainder of this fiscal year. Nixon acted after reviewing a study by Veterans Administrator Donald E. Johnson of the scope of the veterans medical care program and the increasing difficulties it has faced in providing hospital and clinical care.

"To those who have been injured in the service of the United States we owe a special obligation," Nixon said. "I am determined that no American serviceman returning with injuries from Vietnam will fail to receive the immediate and total medical care he requires."

The $15 million supplemental appropriation would be spent in April, May and June to clear up the excessive backlog in Vietnam veterans dental claims and to improve the staffing of specialized medical programs, especially the spinal cord injury centers and coronary intensive care units.

The additional funds also would be used to carry out plans for taking hemodialysis units into the homes of veterans suffering from serious kidney ailments and to help meet increased costs of needed drugs and medicines.

The VA's budget request already submitted to Congress for the 1971 fiscal year beginning in July totals $1.54 billion.

The new request for $50 million will bring the budget for fiscal 1971 to $210 million more than the approved appropriation for fiscal 1970.

* * *

The American Medical Association urged that Congress appropriate as much money as possible for medical education to help "meet the pressing need which exists today for an increased number of physicians."

Testifying before a House appropriations subcommittee, Dr. C. H. William Ruhe, director of the AMA's Division of Medical Education, said the association recognized the need for an overall reduction in federal spending to combat inflation.

"In view of this," he said, "we believe that in any appropriation priorities established for all government programs, those which affect health care should be given primary consideration. Further, because of the special need that exists at this period in our history for more physicians, we urged that appropriations relevant to the production of physicians be given first priority."

Dr. Ruhe pointed out that funds had not been appropriated for a backlog of approved applications for construction of facilities for new medical schools and expansion of existing schools as authorized by the Health Professions Education Assistance Act, the Health Research Facilities Construction Act and the Medical Library Act. He also said that full funding in the amounts authorized by the Health Manpower Act of 1968 is necessary to permit construction of new and expanded facilities before major enrollment increases in medical schools will be feasible.

"The provision in the Administration budget of funds for the Physician Augmentation Program and for special improvement grants has been a considerable incentive to medical schools to expand enrollments," Dr. Ruhe said. "But many schools have already increased their enrollments to full capacity in their existing facilities. Others have been in serious financial distress and are in desperate need of increased operational support to maintain their present enrollments or even to survive. It must be recognized that such schools will need further facilities and operating funds which are necessarily tied to increased enrollments."

The subcommittee's hearings were on appropriations for the 1971 fiscal year beginning this July 1.

Using funds appropriated for the current fiscal year, 1970, the Department of Health, Education and Welfare recently announced nearly 300 grants to schools of medicine and other health professions totalling more than $54 million.

About $7.6 million went to 27 schools of medicine and osteopathy under the Physician Augmentation Program. A government spokesman said the grants would enable the schools to increase their first year enrollment by 395 students.

About $46.5 million in institutional grants was allotted to 260 schools in the health professions—medicine, dentistry, osteopathy, podiatry, optometry, pharmacy and veterinary medicine. These funds also will enable the schools to add more students through purchase of new teaching equipment; improvement of the physical teaching environment, purchase of supplies, books and periodicals, and other expenditures to improve the education of students.

* * *

The American Medical Association supports extensions of the Regional Medical Programs and, with some reservations, the program for Comprehensive Health Planning and Public Health Services.

Testifying before a House Public Health and Welfare Subcommittee, Dr. Bland W. Cannon, Memphis, Tenn., a member of the AMA's Council on Medical Education, emphasized that the AMA believes that RMP "should continue as a program of continuing medical education, with patient care being limited to demonstrations as an adjunct of the education and research processes."

He said the AMA opposes legislation that would combine the individual programs.

"These programs are relatively new and we believe should be evaluated, as well as allowed to develop further evidence of their individual strengths and weaknesses," he said.

Dr. Cannon pointed out that the AMA House of Delegates last December affirmed its support of the concept of Regional Medical Programs and urged AMA members to participate at all levels in giving guidance to implementing the programs.

The AMA supports broadening the scope of the programs to include "other major diseases," in addition to heart disease, cancer and stroke, he said.

He said a combination of the programs would result in a change toward emphasis on patient care in RMP.

"We would view with grave concern any attempt to change this essentially educational program to a program for the provision of health services," Dr. Cannon said. "The medical profession today generally views RMP as a means of aiding the physician to provide better care to his patients. It is this attitude which has brought about the outstanding cooperation between practicing physicians and RMP and which has been a major cause of success for the program thus far. If RMP returns to an earlier concept of providing services to the patient, rather than its present goal of assisting the individual physician to treat the patient more effectively, this cooperation will, in many cases, be lost. The program's beneficial accomplishments will then be diminished."

* * *

The American Medical Association supports in general, legislation (S. 3835) that would provide a comprehensive federal program for the prevention and treatment of alcohol abuse and alcoholism.

Dr. Marvin A. Block, Buffalo, N. Y., a member of the AMA's Committee on Alcoholism and Drug Dependence, termed the measure "a major landmark in public policy" in the field.

"It sets forth the proposition that alcoholism is an illness which can and should be treated, and it commits national resources to the establishment and coordination of facilities necessary for treatment and rehabilitation," he said at a hearing of the Senate Subcommittee on Alcoholism and Narcotics. "We are in general agreement with this legislation."

The bill would establish a National Institute for the Prevention and Control of Alcohol Abuse and Alcoholism. The Health, Education and Welfare Secretary, acting through the institute, would be required to submit within one year a detailed federal program, develop model programs for states, and conduct research and educational programs. Federal grants would be authorized for prevention, treatment and rehabilitation facilities and programs at the state and local level.

Dr. Block specifically favored several of the bill's provisions, including one that treatment and control programs should be community based, whenever possible.

"Insofar as it is feasible and economically sound, most alcoholics should be treated in their own communities and not be relegated to a distant centralized institution for treatment," he said.

But the AMA spokesman questioned some other provisions. He saw no need for a new institute. He said the present National Center for Prevention and Control of Alcoholism could perform the proposed institute's duties and responsibilities.

He said the AMA also questions whether alcoholics should be made eligible for welfare cash benefits and for health care under other government programs, such as Medicare and Medicaid, on the ground that they are alcoholics.

Noting that the legislation is concerned mainly with operation of programs by public and voluntary agencies, Dr. Block said:

"We should not overlook, however, the role that the private physician has played, and can play, in this important area. More and more, the physicians of this country are facing up to the problem of alcoholism in their daily practice. They are recognizing that, as difficult as alcoholism may be, it is an illness which can be dealt with, and that they can help their patients in cooperation with other professionals in the community."

The bill was introduced by Sen. Harold E. Hughes (D., Iowa), a recovered alcoholic and chairman of the subcommittee, and 37 cosponsoring senators.

* * *

L-dopa, a new treatment for Parkinson's disease, has been approved for general prescription use but it may be several months before it is available in ample supply.

"Clinical tests conducted during the past several years by medical researchers and two major drug firms have demonstrated the usefulness of L-dopa in the treatment of this disease which now afflicts possibly a million persons," FDA Commissioner Charles C. Edwards, M.D., said.

Approvals were granted to applications made by Hoffman-La Roche, Inc., and Eaton Laboratories Division of the Norwich Pharmacal Co., Norwich, New York. Both firms conducted studies in animals and humans to establish the drug's safety and effectiveness. An analysis of these studies indicated that benefits to the patient outweigh the risks involved, the FDA said.

"However, the Food and Drug Administration will require both drug firms to continue research into the drug's long-term effects and make certain it is safe and effective for long-term use," Dr. Edwards said. "This is the first time that FDA has included such a requirement in a new drug approval."

In order to give a balanced picture, Edwards pointed out that:

—Clinical studies have shown that approximately one-third of the patients receiving L-dopa do not respond favorably.

—Side effects have been reported in a majority of patients, some of them quite unpleasant and others even dangerous. Whether or not the use of this drug is justified in the very early stages of Parkinson's has not been established.

—Since Parkinsonism is a chronic disease, patients will have to take L-dopa for long periods of time. We don't know how these patients will react after 5, 10, or 15 years of treatment. Because of our limited knowledge of the drug's long-term toxicity, it is conceivable that it could reverse the benefit to risk ratio.

The name L-dopa comes from the initials of an amino acid, levodihydroxyphenylalanine. Dr. George C. Cotzias, of the Medical Research Center, Brookhaven National Laboratory in Upton, New York, was the first to demonstrate the usefulness of L-dopa at high dosage levels. Dr. Andre Barbeau, director of the Department of Neurobiology at the Montreal Clinical Research Institute, has been studying the new drug for the past 10 years and is also credited with aiding in its development as a treatment for Parkinsonism.

* * *

A marked increase in syphilis cases in the United States was reported by the National Communicable Disease Center for the first four

months of this year.

The infectious disease jumped as much as 50 per cent or more in some areas while the nation as a whole experienced an increase to 6,861 cases from 6,203 for the same four-month period last year. One of the biggest increases was noted in New York City where 1,241 cases were reported as compared with 863 for the same period last year.

* * *

Congress approved legislation extending the 24-year-old Hill-Burton federal-aid-to-hospitals program for three years with authorized expenditures of $2.76 billion.

The final form of the legislation was a compromise agreed to by House and Senate conferees after the two branches of Congress passed differing versions.

The authorized expenditures broke down: $1.26 billion for various state grant-in-aid programs for construction and modernization of hospitals, and $1.5 billion for loan guarantees. The measure also authorizes funds to subsidize interest payments on loans up to three per cent.

The legislation approved by the conferees followed the House version for the most part. The Senate had approved a five-year $6.2 billion bill. The conferees eliminated entirely a Senate provision for $750 million of direct loans for public hospitals, which was strongly opposed by the Nixon Administration.

Also knocked out was a Senate amendment for a new formula for allocation of federal funds in a way that would have benefited large industrial states. However, the Health, Education and Welfare Department was directed to make a study of possible formula changes and report to Congress in two years.

* * *

Two physicians and a management expert were appointed Deputy Assistant Secretaries for Health, three long-vacant posts in the Department of Health, Education and Welfare.

The appointees are:

—Dr. Thomas C. Points, Oklahoma City, Okla., for Health Services. He is an alternate in the AMA House of Delegates and on the AMA Council on Health Manpower. As director of the Department of Preventive Medicine at the University of Oklahoma Medical Center, he helped establish the state's rural health project, "Project Responsibility."

—Dr. LeRoy A. Pesch, Buffalo, N. Y., for Health Manpower. He was dean of the School of Medicine at the State University of New York at Buffalo.

—Gerald Riso, New York City, formerly with Booz Allen and Hamilton, Inc., management consultants, for Policy Implementation.

Still vacant in early June were the posts of Deputy Assistant Secretary for Research and Development and for Environmental Health and Prevention of Disease Problems.

Dr. Morris E. Chafetz, director of Clinical Psychiatric Services of Massachusetts General Hospital, Boston, was selected to succeed Dr. Jack Mendelson as chief of the National Center for the Prevention and Control of Alcoholism. Dr. Mendelson is returning to a teaching post at Harvard Medical School.

Two high-ranking officials left the HEW Department with critical blasts directed at their bosses.

Dr. Stanley F. Yolles said he quit as director of the National Institutes of Mental Health because the Nixon Administration had abandoned the mentally ill. HEW Secretary Robert H. Finch said he was fired because he was not cooperative. Dr. Yolles was succeeded by Dr. Bertram Brown who had been deputy director. Despite the dispute, Dr. Yolles will stay in HEW until Nov. 1 as an assistant for mental health to Dr. Vernon Wilson, new director of HEW's Health Services and Mental Health Division. Dr. Wilson succeeded Dr. Joseph T. English who resigned quietly to take a high public health post in New York City.

Robert J. Myers, chief actuary of the Social Security Administration for 23 years, resigned with a charge that Social Security Administrator Robert M. Ball had attempted "to muzzle and intimidate me with regard to three speeches that I was making in support of the Nixon Administration's position on Social Security legislation." Ball denied it, and countered that Myers, who was supposed to be an objective career civil servant, had wanted to be a policy spokesman.

Myers had publicly accused Ball and other high SSA officials of being "expansionists" in the Social Security field with a goal of the federal government providing a retirement income level virtually as high as before retirement.

In a letter of resignation, Myers told Finch that these officials "have not—and will not—faithfully and vigorously serve the Nixon Administration."

New Computer System at Arkansas Baptist Medical Center

Little Rock area doctors now have available to them a computer system designed to assist them in the diagnosis of acquired and congenital pediatric diseases, according to Dr. John W. Lane of Arkansas Baptist Medical Center in Little Rock.

The system, called Computer Assisted Diagnosis (CAD), is marketed by Mead Johnson Laboratories of Evansville, Indiana, and was installed in the Arkansas Baptist Medical Center earlier this year.

CAD has benefits for both the physician and patient. Use of this program can reduce the number of laboratory tests needed for diagnosis and, therefore, shorten the diagnostic period. CAD also allows the physician's time to be utilized more efficiently. For patients this system could mean a shortened stay in the hospital.

Designed by Worley and Ringe, Inc., of Philadelphia and edited by Dr. Lewis A. Barness, professor of pediatrics at the University of Pennsylvania, the system is kept up-to-date by Dr. Barness and other pediatric authorities.

OBITUARY

Dr. W. H. Gibbons

Dr. W. H. Gibbons of Ozark died June 15, 1970, at the age of 95. Born in 1874, he was a native of Lewisville.

Dr. Gibbons was a 1907 graduate of the University of Arkansas School of Medicine and began practice in Ozark in 1920.

He was a member of the Franklin County and Arkansas Medical Societies, and the American Medical Association.

Survivors include his two sons, Dr. W. H. Gibbons, Jr., and Dr. D. L. Gibbons, and four daughters.

THINGS TO COME

The EENT Section of the Arkansas Medical Society has announced September 11th and 12th as the dates for their annual fall meeting. The meeting, which is to be held at the Red Apple Inn at Eden Isle, will feature separate programs for (1) the Eye Section and (2) the Ear, Nose and Throat Section.

Topics and speakers for the Ear, Nose and Throat Schedule are:

"Rhinoplasty," Jack R. Anderson, M.D.

"Progress Report: Department of Otolaryngology," Robert N. McGrew, M. D.

"Serous Otitis Media," Fred Guilford, M.D.

"The Otolaryngologist's Role in Trauma to the Head and Neck," Jack R. Anderson, M.D.

"Recent Advances in Middle Ear Surgery," Fred Guilford, M.D.

Topics and speakers for the Eye Schedule are:

"Complications of Cataract Surgery, Part I," Philip M. Lewis, M.D.

"Current Concepts in Retinal Detachment," R. Sloan Wilson, M.D.

"Restrictive Motility Problems," Roger L. Hiatt, M.D.

"Ophthalmology: A Broad Perspective," Roger L. Hiatt, M.D.

"State of Arkansas Rehabilitation Services for the Blind," Mr. L. H. Autry, Jr.

"Eye Research at the Medical Center," Calvin Hanna, Ph.D.

"Complications of Cataract Surgery, Part II," Philip M. Lewis, M.D.

All interested physicians are invited to attend the meeting. For additional information, contact Dr. Fritz Fraunfelder, Program Chairman, 4301 West Markham, Little Rock 72205, or Dr. James L. Smith, Secretary, 623 Woodlane, Little Rock 72201.

EMERGENCY HEALTH CONFERENCE SLATED FOR SEPTEMBER

The Second Annual Arkansas Conference on Emergency Health Services will be held September 4th at the University of Arkansas Medical Center in Little Rock.

Numbering some thirty sponsoring organizations, including the Arkansas Medical Society,

the conference will be keynoted by two authorities of national reputation on the subject. They are (1) Dr. Ed B. Rowe of the University of Texas Medical Branch, Galveston, and Southwest Representative, American College of Surgeons, Trauma Section, and (2) Captain John M. Waters, Director of the Jacksonville, Florida, Emergency Rescue Service.

Dr. Robert Bransford, Texarkana, is coordinating this year's seminar as overall conference chairman, while Dr. Carl Williams, Fort Smith, is serving as program chairman.

The outstanding success of this conference, inaugrated last year, has been noted by individuals and groups throughout the state. Open to the public and free of charge, conference sponsors encourage and expect a large audience to attend. Everyone with an interest and concern in emergency health services is cordially invited.

PULMONARY PHYSIOLOGY AND PULMONARY MEDICINE FELLOWSHIPS AVAILABLE

Cardiopulmonary Institute of Methodist Hospital in conjunction with the University of Texas (Southwestern) Medical School at Dallas has one month full time fellowships available in pulmonary physiology and pulmonary medicine. These fellowships carry a stipend of $1,000 and the opportunity to achieve additional training in this field. Applications and curriculum vitae should be sent directly to: William F. Miller, M.D., Professor of Medicine, Cardiopulmonary Institute of Methodist Hospital, P. O. Box 5999, Dallas, Texas 75222.

PERSONAL AND NEWS ITEMS

AAGP Selects Dr. Pollock

Dr. George D. Pollock of Osceola has been elected to active membership in the American Academy of General Practice.

Doctors Bradford and Eisele Welcome MGMA at State Meet

Dr. A. Calvin Bradford, Cooper Clinic of Fort Smith, and Dr. Martin Eisele, Burton Eisele Clinic of Hot Springs, delivered the welcoming addresses to the 24th annual meeting of the Southern Section, Medical Group Management Association, held in Hot Springs during June.

Large Number Attend Spring Weekend of Arkansas Caduceus Club

More than 180 doctors and their wives, representing 21 states and Morocco, attended the second annual Spring Weekend of the Arkansas Caduceus Club, June 5-7 in Little Rock.

Dr. Francis Henderson of Pine Bluff, chairman of the Club's Board of Trustees, presided at a business session of the organization.

Drs. J. O. Cooper and William T. Dungan, both assistant professors of pediatrics at the University of Arkansas School of Medicine, participated in the scientific program.

Reunions of various graduating classes of the University of Arkansas School of Medicine were held after being organized by the following class agents: Class of 1930, Dr. William A. Snodgrass of Little Rock; Class of 1940, Dr. Jack W. Kennedy of Arkadelphia; Class of 1945, Dr. John A. Harrel, Jr., of Little Rock; Class of 1950, Dr. Tom Ed Townsend of Pine Bluff; Class of 1955, Dr. Charles N. McKenzie of Little Rock; and Class of 1965, Dr. Don C. Toon of Crossett.

Doctors Located in New Building

The offices of Dr. John A. Rollow and Dr. Don L. Cohagen are now located in the new Bentonville Medical Clinic on Highway 71 North in Bentonville.

Dr. Mobley Honored

Dr. Jack E. Mobley, head of the division of urology at the University of Arkansas School of Medicine, recently received a Golden Apple Award, the highest honor available to faculty members. The award was emblematic of being named outstanding clinical instructor on the faculty.

Mid-Central States Select Dr. Logue

Dr. Richard M. Logue of Little Rock was elected May 2nd in Oklahoma City as vice presi-

dent and president-elect of the Mid-Central States Orthopaedic Society. Dr. Logue will assume the presidency of the organization at the annual meeting scheduled next year for Colorado Springs.

Pine Bluff Medical Director Labels Arsenal Safe

In a recent interview with the Pine Bluff Commercial, Dr. Ralph Wooley, medical director at the Pine Bluff-Jefferson County Health Department, said that, based upon briefings given him by Pine Bluff Arsenal authorities for the disposal plans for sterilized biological warfare material, he had the utmost confidence in Arsenal authorities as to the safety of procedures being used.

Dr. Ketz Announces Associate

Dr. Wesley J. Ketz of Batesville has announced the association with him in general practice of Dr. Lackey Moody as of July 1.

Dr. Robinette Attends Course

Dr. J. S. Robinette of Pine Bluff recently attended a refresher course for emergency room physicians. The course, held in St. Louis, was sponsored by the Emergency Service Committee of the St. Louis City and County Medical Societies and Washington University School of Medicine.

Dr. Lane Admitted to American Board of Family Practice

Dr. W. H. Lane, Jr., of Russellville has been admitted by the American Board of Family Practice after passing its certification examination as a diplomate.

New Clinic Opens at Bearden

Dr. L. E. Drewrey of Camden is the medical director for Bearden Clinic which opened July 1.

Doctors' Offices Targets

Break-ins occurred during late June in the El Dorado offices of Drs. John H. Pinson, Jr., A. R. Clowney, Jack Sheppard, and J. F. Clark. While some minor damage was done to gain entry, nothing was discovered as missing or disturbed in any of the incidents.

NEW MEMBERS

Sebastian County Medical Society announces the names of six new members. They are Drs. Sarah A. Carter, Edgar A. Gedosh, Taylor Archie Prewitt, Lawrence C. Price, Douglas Blythe Smith, and Gerald Eugene Wahman.

DR. SARAH A. CARTER was born in Dover, Arkansas, and did her pre-medical education at Arkansas Polytechnic College in Russellville.

Graduating with the B.S. degree in 1961, Dr. Carter attended the University of Arkansas School of Medicine and was graduated from there in 1965. She then did her internship at Arkansas Baptist Medical Center and a residency in medicine at the Veterans Administration Hospital, both in Little Rock.

Dr. Carter now specializes in internal medicine at the Holt-Krock Clinic, 1500 Dodson Avenue, Fort Smith.

* * *

DR. EDGAR A. GEDOSH is a native of Poteau, Oklahoma. His B.S. degree was accomplished at Northeastern Oklahoma State, in Tahlequah, graduating in 1956.

A 1960 graduate of the University of Oklahoma School of Medicine, Dr. Gedosh interned at St. Anthony's Hospital in Oklahoma City. From there he moved to Baltimore, Maryland, where an Ear, Nose, Throat Residency was done at Greater Baltimore Medical Center and, also, a Surgical Residency was completed at Union Memorial Hospital of that city.

Board certified, Dr. Gedosh now is in practice at the Western Arkansas Ear, Nose and Throat Clinic, 600 South 16th Street, Fort Smith.

Born in Little Rock, DR. TAYLOR ARCHIE PREWITT received his B.A. from the University of Arkansas in 1959.

His medical degree was conferred upon him in 1963 by the University of Washington School of Medicine. Dr. Prewitt interned at North Carolina Memorial Hospital in Chapel Hill and also completed an internal medicine residency at that hospital.

He then served in the United States Public Health, assigned to the Venereal Disease Branch as a Teaching Fellow in Venereal Disease to the Memphis-Shelby County Health Department in Memphis, Tennessee.

Dr. Prewitt also held a teaching appointment from the University of Tennessee College of Medicine in Memphis as a clinical instructor of medicine.

Board certified in internal medicine, Dr. Prewitt practices that specialty at the Cooper Clinic, 100 South 14th Street, Fort Smith.

* * *

DR. LAWRENCE C. PRICE was born in Shawnee, Oklahoma, and graduated from Northeastern Oklahoma State College in Tahlequah in 1959.

His medical degree was obtained from Washington University School of Medicine in St. Louis, Missouri, in 1963. His internship and a three-year residency in internal medicine were done at St. Luke's Hospital in St. Louis.

Dr. Price served in the United States Army from 1964 to 1966.

He now practices internal medicine at 404 South 16th Street, Fort Smith.

* * *

DR. DOUGLAS BLYTHE SMITH hails from Beaumont, Texas. His pre-medical training was accomplished at Hendrix College in Conway before he attended the University of Arkansas School of Medicine, graduating in 1963.

After his internship at the University of Arkansas Medical Center in Little Rock, Dr. Smith served two years as a member of the United States Air Force. Upon completion of those duties, he completed a three-year residency in obstetrics and gynecology at Emory University School of Medicine in Atlanta, Georgia.

A Junior Fellow, American College of Obstetrics and Gynecology, Dr. Smith practices his specialty at 408 South 16th Street, Fort Smith.

* * *

DR. GERALD EUGENE WAHMAN's formal education includes his B.A. degree from the University of Iowa in Iowa City, class of 1958, and his medical degree from that institution's School of Medicine, class of 1962.

After interning at Charity Hospital, New Orleans, Louisiana, Dr. Wahman served two years as a member of the United States Army. He then returned to his alma mater to do a three-year residency in urology.

For the past year, Dr. Wahman has been practicing urology at the Holt-Krock Clinic, 1500 Dodson Avenue, Fort Smith.

* * *

Miller County Medical Society has added DR. MARY WITT HUGHES to its membership rolls recently.

Born in Texarkana, Dr. Hughes attended both Texarkana College and the University of Texas in Austin, receiving her B.A. degree from the latter in 1939.

In 1942 she was graduated with a medical degree from the University of Texas Medical Branch at Galveston and then interned at Charity Hospital, New Orleans, Louisiana. A three-year residency in orthopaedic surgery was also completed at Charity Hospital. During that period, Dr. Hughes became Senior Resident, Louisiana State University Service, for orthopaedic surgery.

Board eligible, Dr. Hughes is a member of the Arkansas Orthopaedic Society, the Mid-Central Orthopaedic Society, and a Fellow, American College of Surgeons.

Dr. Hughes' orthopaedic surgery practice has its offices at 1001 Main Street, Texarkana.

* * *

DR. JOHN KUHREN JONES is a new member of the Craighead-Poinsett County Medical Society. He was born in Simpson County, Mississippi.

Dr. Jones attended Union University, Jackson, Tennessee, for his pre-medical education and also graduated in 1927 from the Danforth's School of Pharmacy, located in Fort Worth, Texas. In 1933, he received the medical degree from the University of Tennessee College of Medicine in Memphis.

Dr. Jones interned at Highland Avenue Baptist Hospital, Birmingham, Alabama, before entering private practice.

After short periods of practice in Smackover and Greenville, Mississippi, Dr. Jones settled in Lepanto where he has been in general practice for thirty-six years. In Lepanto he has served as its City Health Officer for twenty-four years and has been a member of its school board and Board of Public Utilities for similar lengths of time. He is a member of the American Geriatric Society, Incorporated.

His office is the Dr. J. K. Jones Clinic, 129 Greenwood Avenue, Lepanto.

* * *

Four new members of the Pulaski County Medical Society are announced. They are Drs. John H. Bornhofen, Jerry G. Jones, James Gray McKenzie, and Charles Lindsey Miller.

DR. JOHN H. BORNHOFEN was born in Evanston, Illinois.

His formal education lists B.S. and C.A. degrees from Northwestern University in Evanston and a B.S. in engineering from Iowa State University in Ames, Iowa. Dr. Bornhofen graduated from Loyola University Stritch School of Medicine, Chicago, Illinois, in 1954.

His internship was done at University of Minnesota Hospital in Minneapolis. Subsequently, two three-year residencies in pediatrics and neurology were accomplished under that institution's auspices—1955-57 and 1957-60. Dr. Bornhofen received board certification in pediatrics in 1962.

Memberships in the American Academy of Neurology and the American Academy of Cerebral Palsy are held by Dr. Bornhofen.

He was a member of the University of Minnesota Medical School faculty before joining the teaching staff of the University of Arkansas School of Medicine where he is now an Associate Professor of Pediatric-Neurology, Department of Pediatrics. His work is by appointment only and is limited to pediatric-neurology.

* * *

DR. JERRY GORDON JONES, a native of Little Rock, began his pre-medical education by attending Little Rock University and Hendrix College in Conway before entering the University of Arkansas School of Medicine.

After receiving his medical degree in 1963, Dr. Jones remained at the University of Arkansas Medical Center for his period as an intern. From 1964 through 1966, he completed his residency in pediatrics, also at the Medical Center in Little Rock.

From 1966 to 1968, Dr. Jones served in the United States Air Force with the rank of captain.

Board certified in pediatrics in 1968, he is a member of the American Academy of Pediatrics and the Central Arkansas Pediatric Society.

Dr. Jones, too, is a member of the faculty of the University of Arkansas School of Medicine and the Department of Pediatrics. He is an Assistant Professor and his practice is by appointment only and limited to pediatrics.

* * *

Born in Smackover, DR. JAMES GRAY McKENZIE began his higher education at Southern State College, Magnolia, where he received his B.S. in 1957.

He then entered the University of Arkansas School of Medicine and was graduated with the class of 1961. His internship was completed at St. Vincent Infirmary in Little Rock before serving two years as a captain in the United States Air Force.

In 1966, Dr. McKenzie returned to the University of Arkansas Medical Center where, in 1969, he finished a three-year residency in radiology.

Dr. McKenzie is now an instructor at the University of Arkansas Medical Center, Department of Radiology, and is a Junior Member of the Radiological Society of North America.

* * *

DR. CHARLES LINDSEY MILLER was born in Little Rock and attended the University of Arkansas where he received a B.A. degree in 1958.

He then entered the University of Arkansas School of Medicine and earned his M.D. in 1962 before interning at Parkland Memorial Hospital

in Dallas, Texas. Two years were then spent as a captain in the United States Air Force.

From 1965 to 1968, Dr. Miller was a resident in internal medicine at the University of Arkansas Medical Center. He has recently completed further graduate training, finishing a two-year fellowship in renal disease earlier this year.

Board certified, Dr. Miller's type of practice is internal medicine and nephrology. His office address is 900 North University, Little Rock.

REPRESENTATION OF SUB-SPECIALTIES ON FEE COMMITTEE

Action of the House of Delegates of the Society at the 1970 Annual Session called for rotation of membership on the Fee Committee, and representation for the various sub-specialties. The following specialties and/or sub-specialties are not currently represented on the committee: Aerospace Medicine; Cardiovascular Disease; Child Psychiatry; Diagnostic Radiology; Forensic Pathology; Gastroenterology; General Preventive Medicine; Occupational Medicine; Pediatric Allergy; Pediatric Cardiology; Physical Medicine and Rehabilitation; Public Health; Pulmonary Diseases; Therapeutic Radiology; and Thoracic Surgery. Physicians practicing any of these specialties who feel their specialty group should be represented on the Fee Committee should organize their group and nominate three members for committee membership. Nominees must be members of the Arkansas Medical Society and must be willing to meet monthly with the Fee Committee. Please obtain consent of nominees for submission of their names. Send nominations to the headquarters office, Arkansas Medical Society, Post Office Box 1208, Fort Smith, Arkansas 72901.

Clinical Evaluation of Internal Mammary-Artery Implantation

R. Balcon et al (National Heart Hosp, London)
Lancet 1:440-442 (Feb 28) 1970

Twenty patients with severe ischemic heart disease were assessed before and at least ten months after a revascularization procedure. The assessment consisted of clinical examination with special attention to the signs of left ventricular dysfunction, electrocardiogram, chest x-ray, and selective coronary angiography. An objective assessment was obtained by an atrial pacing test. The operation consisted of bilateral internal mammary-artery implantation in 17 patients and unilateral in three. Five of them had some additional procedure done. The assessment was repeated after operation with internal-mammary angiography in place of coronary angiography. Seventeen patients survived more than one year and 12 of these (71%) were subjectively improved. They represent 60% of the original group. The objective assessment by atrial pacing correlated with the clinical results. Angiographic evidence of communication of the implanted vessel with the coronary-artery tree was demonstrated in only three patients and 13 of the 18 vessels assessed were occluded.

Depletion of Lymphocytes For Protection of Renal Allografts

H. E. Sarles et al (Univ of Texas Medical Branch, Galveston)
Arch Intern Med 125:443-450 (March) 1970

Fourteen patients with uremia received 17 cadaveric renal allografts following lymphocyte depletion by means of thoracic duct cannulation. As depletion progressed, marked lymphocytopenia appeared, large lymphocytes appeared in the lymph, peripheral lymphoid tissues became depleted in the thymus-dependent areas, immunoglobulin levels remained constant, and delayed hypersensitivity skin responses disappeared. Renal allografting was performed following the removal of as few as 10×10^9 and as many as 331×10^9 lymphocytes. Immunosuppressive drugs were not administered unless allograft rejection occurred or the patient was discharged from the hospital. Little evidence of rejection was noted for as long as 78 days following transplantation. Excellent renal function is maintained in all but one of the nine survivors. The depletion of circulating lymphocytes prior to renal allotransplantation appears to selectively suppress cellular defenses and enhance graft survival without seriously depressing humoral defenses.

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FORT SMITH, ARKANSAS

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APPROVED THREE-YEAR RESIDENCIES
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Vacancies for July, 1970, and January, 1971, Arkansas State Hospital, Little Rock, Arkansas. Yearly stipend range $11,976-$15,500, depending on experience beyond internship. Applicants must be graduates of approved medical schools in U. S. or Canada. The residence program includes community psychiatry, experience with day hospital and outpatient clinic. One full year of affiliation at University of Arkansas Medical Center for child psychiatry, neurology and psychosomatic medicine. The State Hospital is completely open and oriented toward mileau therapy. Write R. R. Nolen, M.D., Director of Psychiatric Residency Training, Arkansas State Hospital, 4313 W. Markham, Little Rock, Arkansas 72201.

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Looking Back on '69/'70

A Report of the Activities of the Arkansas Chapter Of the Student American Medical Association

By Donald C. Thompson, President 1969/70

This year was the second in a beginning series of significant advances for Arkansas SAMA. Following on the heels of the opening year of the Community Health Clinics with its concurrent influence toward stimulating students to become active, this year has been one of increased student interest and participation in not only the community health clinics but in other activities of SAMA. And, many more students are showing an active interest in the many facets of SAMA activities we will discuss here.

Distinguished Lecturer Series

Being cognizant that, in the words of Martin Gross in his book, THE DOCTORS, medical school "changes from [the medical student] from a social leader, intellectually and humanly, to a man of mediocre intellect, trade school mentality, and incomplete personality — the contemporary non-renaissance man," SAMA has this year endeavored to open the eyes of the students to the currents and controversies of medicine today. This has been attempted primarily by establishing what is hoped to be an annual Distinguished Lecture Series.

The speakers who have participated this year represent many facets of medicine: the establishment pharmaceutical industry, the "new left" of medicine, blacks in medicine, the family physician, establishment (government) medicine, and the right wing of medicine. The speakers are:

Mr. C. Joseph Stetler, President
Pharmaceutical Manufacturers Association

Dr. Quentin D. Young, Past National Chairman
Medical Committee for Human Rights

Dr. John L. S. "Mike" Holloman,
Past National President
National Medical Association

Dr. Edward J. Kowalewski, President
American Academy of General Practice

Dr. Roger O. Egeberg, Assistant Secretary for Health and Scientific Affairs
Department of Health Education and Welfare

Dr. Charles W. Johnson, Chairman
Committee for Education of Medical Students, Interns, and Residents
Association of American Physicians and Surgeons

Two of these speakers, Drs. Young and Holloman, have been long time national advisors to the Student American Medical Association.

Each of the lectures have been informative and challenging. Ideas have been expressed that rock the very foundations of our medical education and our involvement, or lack of it, in the many aspects of our society which govern our lives and our service to our fellow man. It is firmly believed by the leaders of Arkansas SAMA that students should be not only aware of but thoroughly familiar with both the foundations of medicine and society as they are today and with those ideas and concepts that are intellectually, philosophically and functionally at odds with those foundations and which are in some instances seeking to change those foundations.

In the past Arkansas SAMA established a Medical Student's Research Forum in cooperation with the administration of the School of Medicine. This forum was later completely taken over by the School of Medicine and is now a function solely of that administration. It is hoped that even though Arkansas SAMA has had the full cooperation of the School of Medicine and

the Vice President's Office in word, action and in part of the finances, this Series of Distinguished Lecturers will remain primarily a student activity.

Committee Activities

SAMA's committee activities have also been worthy of note this year. The Community Health Committee after advisement by National SAMA against incorporation of the local chapter sought after and actually established an Arkansas Health Students Council for the purposes of incorporation so that tax exempt donations could be sought, to make available a more ready access of other health professionals to become involved in the planning and development of the clinic projects, and to allow an avenue of involvement by the community leaders in the communities in which the projects are carried out.

At present there are six clinics in three locations in and around Little Rock: Scott, Arkansas, McAlmont in North Little Rock, and the East End (College Station) area of Little Rock. Each clinic is staffed by volunteers made up of students of medicine, nursing, pharmacy, medical technology, and x-ray technology. Each clinic is supervised by licensed physicians from the house staff and faculty of the University Hospital and, in the case of the East End Clinic, supervision is maintained by three Little Rock general practitioners.

Over the last school year many other local SAMA chapters have become incorporated for the very reasons for which the AHSC was established. In light of this, negotiations are currently going on to incorporate Arkansas SAMA and transfer the governance of the clinics to the founding organization.

Many people have questioned the value of the clinics and the philosophical implications. By and large the clinics represent a very shallow cut above nothing in medical care for the people serviced. Primarily they do represent an effort on the part of the students to offer some health care, even as a screening clinic, for the people in areas that lack sufficient medical aid. Also, they represent a teaching facility for students to work informally with the clinic supervisors and learn new approaches to physical diagnosis and to learn what type of practice a private physician often sees.

The clinics are expected to grow as more students become involved and as more private physicians and house staff officers show an interest in doing volunteer work in the poorer regions of Little Rock. It is not expected that these clinics will ever detract from the current high quality of medical practice seen around Little Rock.

Twelve students from Arkansas SAMA attended the first National Conference on Community Health in Kansas City. Three of these students were group leaders. All have come away with ways to better Arkansas Community Health Clinics.

The medical education committee has made efforts throughout the year to have students become more intimately associated with the inner workings of the school of medicine. Requests have been made for students to sit on the Admissions Committee and the Loans and Scholarships Committee. These requests have been denied; but, a student does sit as a voting member of the Curriculum Committee and the Associate Dean has said that there will be representatives from each class on the Curriculum Committee.

Plans are being made to survey students' attitudes on their various courses and instructors. It is hoped that these surveys will be made use of by the administration to revamp or even delete both courses and instruction in those courses so that students can better realize the necessity and potential of each and every course. It is widely known that both courses and instruction often have gross inadequacies and this is an attempt by the students to help correct some of these.

Four students from Arkansas went to the 2nd National Student Conference on Medical Education sponsored by the Student American Medical Association and which took place in Chicago at the Pick Congress Hotel just prior to the AMA Congress on Medical Education. Then nine students went to the Regional Conference on Medical Education sponsored by National SAMA through a grant from the Carneigie Foundation. All these students have brought home new ideas and concepts and are going to be working hard to put these into effect at Arkansas.

Arkansas SAMA's Medical Education Committee has also been working hard to increase the numbers of minority group applicants to our school of medicine. They have found that even though minority students (in Arkansas this being virtually synonymous with black students) are considered equally with white students that the

"word is out" that they are discriminated against both for admission and for grades. Since this is not true the committee is making every effort to inform those minority students of this and stimulate them to apply to Arkansas.

Within the past two or three years there has been a national push to increase the number of minorities in medicine and the allied health professions. This has made it so that for the entering class of 1969 a much higher percentage of minorities were taken than before. Also, this push, particularly by the larger northern schools, has made it such that almost any ""qualified" minority applicant can get into a non-southern medical school. And, since the pool of minority applicants to medical schools has not increased commensurate with this increase in demand then many southern medical schools are left with very few or no minority applicants, much less qualified applicants who can be accepted.

Preceptorships

Contact has been made this year with the Pulaski County Medical Society and the Arkansas Medical Society in an effort to entice the private physicians and the hospitals of the state to make available medically related jobs to students during the vacation periods regardless of their classification in school. This would be following suite with the states of Illinois, Oklahoma, and others who are endeavoring to carry out similar plans. It might be well to look at one of these plans and see how it works.

Last summer this type of preceptorship program was established in the state of Illinois. In cooperation with the Illinois State Medical Society, the Illinois Academy of General Practice, and the Illinois Hospital Association, the Illinois chapters of SAMA set up this revolutionary undertaking whereby 70 students of the first and second year classes of medical schools were assigned to 25 hospitals around their state and were thus given their first real exposure to clinical medicine — private clinical medicine. Their program was designed to fill the gaps left open in the first two years by allowing the student to gain first hand experience with hospitals, (private) physicians, and patients. Although their program varied from hospital to hospital and even from student to student within a given hospital, the students rotated through all areas of a hospital. The ten-week program devoted time to emergency room, intensive care, x-ray, surgery, anesthesiology, obstetrics, urology, and even dietary, pharmacy, central supply and credit office. Students at many hospitals were assigned to private practitioners and made rounds with them as well as spending time in their offices. They were thus able to see how medicine is practiced both in the community hospital and out in the physician's office.

The evaluation thus far on the Illinois program indicates strongly that a community hospital can be very effective as a teaching institution, that practicing physicians can be extremely effective teachers, and that students can learn something about practical medicine before embarking on their clinical years.

It is felt by Arkansas SAMA that this type of program would be most beneficial by keeping students of medicine close to their chosen field throughout their training and by giving the student a more significant and, hopefully better, view of private medicine as it really is and thus help to educate them that the many pseudo-intellectual arguments of people to radically change the system are usually greatly exaggerated and at least open to debate.

The initial plan in this area involved having students receive school credit for this work; but, it is now felt that this is both unnecessary and virtually impossible.

More work is required in this area, but most of the work must of necessity be carried out by the private physicians and hospitals in working out the details of employment of students.

The Sophomore Preceptorship Program established three years ago which allowed second year medical students to "team up" with private physicians in Little Rock for the weekends has not been an overall successful program and, if arrangements can be completed for the jobs mentioned above, this program will no longer be necessary.

SAMA News

During the last two years the Arkansas chapter of SAMA has had a section in the Medical School Newspaper, THE MEDICO. This was initially being paid for; but, when it became evident that the chapter would have financial difficulty, the editor of the paper arranged for those fees to be waived.

The editorials on the page have served as a provocative and stimulating part of SAMA's life role. They have brought comment and criticism,

both constructive and destructive, from many people; students, faculty, and practicing physicians. They have served to involve many students of diverse political philosophies in the organization and its activities. Besides the editorials, SAMA News has carried articles concerning local and national activities.

There are discussions presently underway to have *The Medico* editorial board transferred from the Medical School Student Council to the Associated Students' Council. And, while it is understood that at the beginning of the paper the only truly active body was the MSSC and that the ASC ostensibly represents the whole of the student body, it is felt that should this transition take place, that SAMA will necessarily have to start its own newspaper. The primary reason for this is the already demonstrated efforts of schools other than the medical school to censor THE MEDICO.

Liaison

It is felt that an effective and working liaison was carried out this year with the Arkansas Medical Society, the Pulaski County Medical Society, and the Arkansas Academy of General Practice. Each of these organizations has contributed suggestions and aided in obtaining financial backing when needed. The Arkansas Medical Society contributed heavily to the chapter and invited the President to each of its Executive Council meetings. At these meetings the reception was cordial and indicative of acceptance as a neophyte member of the profession. During the discussions with the Executive Council all aspects of the chapter's activities were discussed along with the importance of an even closer working relationship, as in the preceptorship program.

Membership

Even though the year was begun with a get together picnic sponsored jointly by Arkansas SAMA and the Arkansas Medical Society, only 35% of the freshman class was signed up as members. This made the overall membership at about 62%. However, for the first time in many a year, more freshmen have joined since registration to bring them to 55% and the overall membership to 69%.

It is sincerely felt that through the current program of continuous low-key recruitment and through the natural publicity which attends an increased tempo of activities, the chapter will surely grow and prosper.

Miscellaneous

The SAMA used book sale exchanged almost $1000 worth of textbooks during the year, at a 10% commission. In order to make this service more readily available throughout the year, negotiations are underway to have the bookstore permanently housed in the basement of the dormitory in a room currently reserved for, but seldom actually used by, the yearbook and newspaper staffs.

The Golden Apple Awards last spring went to Dr. Dennis Lucy, Associate Professor and Head of the Division of Neurology, and to Dr. Jasper McPhail, then Associate Professor of Surgery and Associate Dean of the School of Medicine (now Director of Medical Education at Arkansas Baptist Medical Center). The awards for 1969/70 will be made at the spring convocation in May of this year.

Plans are to reinstitute the weekly film series during the coming year. This series in the past has presented a wide and impressive array of medical and sociological films to a biweekly noon audience.

Summary

Arkansas SAMA has been active during the 1969/70 school year; but, much needs to be done yet. The number of active workers for the organization has grown but remains small. The new Executive Council has already gotten off to a flying start this year by drawing more effectively on the freshmen and sophomores. The sky is the limit at this point in time and the new Council is headed that way. However, they probably can't make it without tremendous support from both the faculty and the private physicians; at least, their sailing will be easier if they have it. Here's looking to the most committed and active year Arkansas SAMA has ever seen.

28 March '70

Insights Into the Total Cleft Palate Child

John Walton, M.A.*

The child with cleft palate is a unique individual. In a lecture presented by H. Koepp-Baker, he was quoted as saying, "A cleft palate child, if given the proper attention in regards to treatment and care, will require the care equivalent for two children without cleft palate." In other words, Koepp-Baker was saying that the hospital, medical, dental and educational needs (special classes, speech therapy, etc.) will be quite extended as well as expensive.

From the onset of birth the child with a cleft palate is by no means "out of the woods," and represents a special problem in terms of health status. Past records and experiences have shown the difficulty in preserving health and preventing disease. From the first day of life, the cleft palate child exists in an atypical nutritional and respiratory environment as opposed to the "normal" child. Due to the palatine cleft the feeding process is impaired because of lack of sucking ability and the escape of food via the nasal passages.

In the event the child survives the first few crucial days of life, there is a continual fight against disease. The oral cavity, being as it is, is most conducive and susceptible to bacteria and disease. The combating of infection is a constant necessity. All types of upper respiratory diseases must be under constant surveillance. In most instances, middle ear infections are allied with cleft palate due to connection of the Eustachian tube which leads from the middle ear to the nasopharynx. These children are constantly plagued with colds, earaches, and sort throats.

The Parent of the Cleft Palate Child

The parent of the cleft palate child has many questions which are not always answered. The physician and speech therapist are often called upon to answer some of these questions. In addition to the answering of questions, it is often vital, for the purpose of "good therapy," to volunteer information to the parent.

Lillywhite reports seven matters which were undertaken in conjunction with needed information on the part of the parent. The following points were discussed in the Oregon Cleft Palate Program:[1]

1. The nature of cleft lip and palate. As much detail is given as is felt the family can understand and use. An attempt is made to assure the family that no one is to blame, to lessen feelings of remorse, guilt, or despair, and to offer all the support and assurance that the occasion demands;
2. An outline of the important aspects of the total treatment program and the usual sequence and time of various aspects of treatment.
3. An explanation of the surgery that will be performed is given. Often it is advantageous to go into some detail, using pictures, drawings, etc., to show what can and will be done;
4. A description of the problems that the child and family probably will face in the areas of language development, speech problems, danger of infections and possible hearing loss, dental problems, problems of adjustment and general care;
5. An attempt is made to impress upon the parents the necessity of early and constant dental care, the need for early medical attention in cases of upper respiratory infection, and the need to follow closely the steps in treatment;
6. Attention is given to the parents' attitudes toward the problem and their ability to understand and handle it. Every effort is made to bring about a healthy, confident, relaxed attitude toward the child's future development; and
7. Specific instruction is given to speech development and methods of increased selective speech stimulation.

Team Approach to Cleft Palate Habilitation

For maximal results in regards to the total cleft palate individual, a well planned team approach is imperative. A committee of professional people, each representing his profession and part of the habilitation, should be included as a vital part of the team. At a minimum this team of professionals should include a pediatrician, a plastic surgeon, a dentist, an orthodontist, a prosthodentist, a speech therapist, a psychologist, a social worker, and a person involved in the educational program.

After the patient has been examined in every

* Department of Pediatrics, University of Arkansas Medical Center, Little Rock, Arkansas.

respect by the different specialists, the committee should then state a prognosis after all the examination data has been collected and discussed. Aims and goals should be planned in terms of extending as far into the patient's future as adolescence and often into adulthood.

Harkins suggests three requirements when considering the individual responsibilities of the integrated effort which has just been discussed.

1. First, it must be realized that a total range program must be projected for the person with a cleft palate or lip. He is handicapped in many ways and the program planned must contribute to the restoration of the whole person.
2. The second requirement in this project is that the service must be rendered by persons fully qualified and at the correct time when intervention should take place.
3. In the sequence of intervention the third factor is that no step should be omitted. Performing only a part of the long range program may do very little good and may result in harmful and unsatisfactory functional results for the person.[2]

Otologic and Audiologic Considerations of Cleft Palate

The cleft palate child has, as was earlier mentioned, allied hearing and upper respiratory complications. It is important that constant examination be kept in conjunction with these trouble areas.

"The lymphoid (Ring of Waldeyer) which surrounds the Eustachian tube is often infected, producing the sequelae of otitis media and reduced hearing (conductive losses) in many cases. Other cleft palate children who have not suffered from otitis media also show hearing losses, probably because of the disparity in pressures between the outside and the middle ear and because the middle ear does not receive proper aeration through the Eustachian tube."[3]

According to Koepp-Baker, ". . . muscles of the epipharynx are largely responsible for the air pressure regulation in the middle ear. The interference with velopharyngeal action imposed by cleft palate and by palatal insufficiency has long been suspect as a factor in the high incidence of middle-ear disease in children and adults with cleft palate. Since the external and internal deformities of the nose characteristic of cleft palate-and-lip interfere with ventilation and drainage, these congenital deformities seem to add further hazards to pharyngeal and otological health. The hearing loss that frequently attends middle-ear disease plays an important role in the speech and in the general behavior pattern of cleft palate persons."[4]

Intelligence and the Cleft Palate Person

Is the child with a cleft palate impairment retarded in terms of intelligence? This question is often asked about the cleft palate individual. The answer should be well explained, no! Cleft palate children should not be, generally speaking, thought of as being mentally retarded.

However, to the question, "Are children with cleft palates slower than other children without cleft palates?" The answer should be a slow and explained, perhaps! There is in the literature rather clear evidence that children with cleft palates have impaired articulation skills, language skills, and communication skills. The evidence, however, on the intellectual impairment, is scanty and incomplete.

According to Goodstein,[5] there are, to his knowledge, only two published research studies known that are specifically concerned with the intelligence of persons with cleft palate. A study of Billig reported Intelligence Quotients (I.Q.'s) of 60 children with cleft palates, aged two months to 17 years, to be 64 to 130, with a mean score of 94. Billig's findings are hard to interpret, however, because they were based upon eight different measures of intelligence. Munson and May reported a mean I.Q. of 96 for 151 persons with cleft palate of unspecified ages, based upon two different intelligence tests. Both of these studies provide data which suggests that while the distribution of I.Q.'s in persons with cleft palates is approximately normal, there is some "sqewness" toward the lower end of the intelligence continuum. Thus, apparently neither the degree nor the specific nature of intellectual impairment in persons with cleft palate has been determined.

There seem to be many environmental factors which tend to group the cleft palate individual into the lower portion of the "normal range" of intelligence.

The Age Speech Therapy Should Begin

Perhaps one of the biggest questions in regards to the cleft palate child is when should therapy begin. There are many different opinions about this question. Morely,[6] has this to

say about the ideal time for speech therapy: ". . . As we have found that the majority of the children gain normal speech spontaneously, usually after having passed through a period of defective articulation, speech therapy is not given until the child is at least four years old, and then only if he has very defective speech which in many of these children is not associated with the cleft palate. Two hundred and thirty-eight of these children (71%) had no speech therapy. Thirty-three children required extensive periods of speech therapy, while 64 had attended for shorter periods of time varying from one to 12 months, in some cases for correction of only a residual defect of the sound (S). Among these children were also those who had submucous cleft and others who had been operated upon later in cleft after defects of articulation had become firmly established."[6]

"It has been noticed that defects of articulation tend to be more persistent in children with the more severe type of cleft. We found that 43 per cent of children with bilateral complete clefts, 23 per cent of those with unilateral complete clefts and 18 per cent of those with postavleolar clefts had required speech therapy."[6]

Morely feels that speech therapy should begin at not earlier than four years of age. However, she does not say that the child should be left alone to develop habits which will only slow down and harm the chances for maximal speech therapy once the child has reached an age suitable for work in speech. Thus, work with the child begins early in life. The purpose is not to improve speech, but to help the cleft palate individual utilize to the maximum the oral speech apparatuses.

"Postoperative treatment for the cleft palate child is best carried out where the combined efforts of the surgeon, orthodontist and speech therapist are available, and much time can be saved if speech therapy can be carried out in association with a regular follow up by such a team. It will vary according to the age of the child, and falls broadly into three stages."[6]

1. *Under four years of age*—Following operation the children should be seen at least every six months, and the first approach toward normal speech should be the child's ability to make use of the palatropharyngeal sphincter in blowing. Vigorous blowing games are not as a rule necessary, but many children continue to blow through the nose with closed lips rather than through the mouth, when a partition has been provided surgically. It must be remembered that they have been deprived of the opportunity in infancy to develop normal neuromuscular coordination of the palatal and pharyngeal muscles through crying, sucking, swallowing and babbling, and normal function is not necessarily established immediately, nor in fact for several months in some instances, following a good anatomical operative result.

At this age treatment should be in the hands of the mother. If the child is not using the sphincter mechanism when attempting to blow or speak, blowing games are helpful, and can be carried out at home if suitable suugestions are made to the mother. It may be necessary to hold the child's nose with the fingers until he learns to direct the air stream through the lip or until he learns to make use of the sphincter mechanism. He should also be allowed to attempt to suck fluids through a straw.

At a later stage, if normal articulation is slow to develop, the mother may be shown how to obtain a few consonant sounds and the use of such sounds in simple babble drills, but it is generally sufficient if the child can produce each consonant sound in isolation, for example, as the noise an animal makes (baa---), a snake (S---), the sound a train makes (ch ch ch ch---), an airplane (v---), raindrops (pt pt pt pt---) and so on. Exercises usually not necessary at this stage, and as speech develops these "noises" will eventually be incorporated correctly into the words he uses.

2. *Over four years of age*—With those patients whose speech is well established speech therapy may commence as soon after operation as the surgeon advises, usually after about one month from the date of operation. The palate should then be soundly healed, but its condition, especially as regards movement of the soft palate, will continue to improve for several months.

If early directive treatment with the mother has not been possible, operation has been postponed until faulty articulatory habits have become firmly established, normal use of the palatopharyngeal sphincter has not been achieved, or a fistula in the hard palate has prevented the build up of the oral pressure necessary for articulation, speech will be defective, and regular speech therapy should now be commenced. A child of four years is usually able to cooperate, and with the mother's presence during treatment and help with daily practice

at home, normal speech may be achieved before the age for school is reached. It is a definite advantage to the child if he can speak intelligibly when he goes to school. Not only is life rendered much easier in many ways, but he is able to maintain progress with the other children, especially when learning to read. At the same time, it has been found that the introduction of a child to school life is often a great stimulus, providing him with an added incentive towards the acquisition of good speech. The first year at school may, therefore, be extremely valuable period for speech therapy.

3. In this group are those older children where secondary operation has been necessary, or those children and adults who have retained their faulty habits of speech for one reason or another. In the case of such older children, the mothers rarely attend the clinic and are therefore unable to assist with home practice. Daily speech therapy may then be necessary, as such children find it almost impossible to make progress without assistance and frequent practice. The adult, however, can appreciate more readily the difference between normal and defective articulation, and can therefore carry out the necessary daily practice alone.[6]

Summary

In summary, an attempt should be made to help the patient and his family cope with the myriad social and emotional problems which arise from this condition. Guidance and emotional support should be given where indicated to enable the patient to make the best adjustment to his medical care and daily living. The physician should establish an early relationship with the mother and father and make it clear that he is available to help with problems hindering the child's adjustments at home, at school, or in the community. Physicians should be aware that the public health nurse, the school nurse, the school social worker or guidance counselor can be a great asset to him in following the patient's medical, emotional and educational progress.

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Ophthalmic Graves' Disease

R. Hall et al (Royal Victoria Infirmary, Newcastle upon Tyne, London)

Lancet 1:375-377 (Feb 21) 1970

The clinical and laboratory features of 26 euthyroid patients with ocular manifestations of Graves' disease are presented. The eye signs are commonly asymmetrical. Goiters, often small, were present in nine patients, vitiligo in two, and a family history of thyroid disease of pernicious anemia in seven. The incidence of thyroid and gastric antibodies was significantly higher than in matched controls, and a third of all the patients had high titers of thyroid antibodies similar to those in patients with Hashimoto's disease. The incidence of high titers of thyroglobulin antibodies was significantly higher than in patients with Graves' disease who were hyperthyroid. The long-acting thyroid stimulator (LATS) could be detected in the serum in only two patients. These results indicate the presence of some thyroid abnormality in the majority of the patients with ophthalmic Graves' disease, but suggest that LATS is unlikely to be a major factor in the pathogenesis.

Comparison of the Incidence and Site of Malignancies In Taipei, Taiwan and Little Rock, Arkansas

William E. Jaques, M.D.*

Introduction

It has long been recognized that a remarkable difference in the incidence of neoplasms exists in different geographic areas.[4,7] It is also apparent that studies on the geographical distribution of tumors may shed some light on the etiology and pathogenesis of tumors. It was decided that a comparison of malignant tumors in Taipei, Taiwan, and Little Rock, Arkansas, occurring in consecutive post mortems on adult males might be of value in pointing up possible socio-economic and environmental differences.

Materials and Methods

Four hundred and fifty consecutive post mortems from the Veterans Hospital, Taipei, Taiwan, and the University of Arkansas Medical Center, Little Rock, Arkansas, were reviewed. Only males that were 21 years of age or older were included. No coroners' cases were included in this study. Particular attention was directed to the site of malignancy. The microscopic sections were reviewed.

It is difficult to obtain permission for post mortem examinations in Nationalist China due to religious and cultural beliefs. The large number of necropsies at the Veterans Hospital is largely attributed to the deceased veterans having their survivors living in Red China. The post mortems may then be ordered by the Hospital Director. Women were not included in this study since post mortem examinations on Chinese females is too uncommon to be statistically valid.

TABLE 1

TYPE AND SITE OF MALIGNANCIES IN TAIWAN

Type	*Site*	*Number*
Hepatoma	Liver	44
Squamous Cell Carcinoma	Esophagus	35
Squamous Cell, Adenocarcinoma & Undifferentiated Carcinoma	Lungs	34
Adenocarcinoma	Stomach	32
Leukemia & Lymphoma	Lymphohematopoietic	18
Adenocarcinoma	Pancreas	7
Squamous Cell Carcinoma	Nasopharnyx	7
Astrocytoma	Brain	4
Transitional Cell Carcinoma	Urinary Bladder	4
Adenocarcinoma	Colon	2
Craniopharyngioma	Hypophysis Cerebri	2
Adenocarcinoma	Thyroid	2
Squamous Cell Carcinoma	Larynx	1
Adrenocarcinoma	Prostate	1
Malignant Mixed Cell Tumor	Parotid	1
Squamous Cell Carcinoma	Skin	1
Mesothelioma	Pleura	1
Hemangiosarcoma	Liver	1
Bronchial Adenoma (Metastatic)	Lung	1
Squamous Cell Carcinoma	Tongue	1
Meningioma	Brain	1
Squamous Cell Carcinoma	Maxillary Sinus	1
Melanoma	Skin	1
Cortical Carcinoma	Adrenal	1
Medulloblastoma	Cerebrum	1
Leiomyosarcoma	Retroperitoneal	1
Seminoma	Testis	1
Malignant Teratoma	Mediastinum	1
Adenocarcinoma	Gall Bladder	1
Malignant Non-chromaffin Paraganglioma	Organ of Zuckerkandl	1
Adenocarcinoma	Site Undetermined	1
	Total	210

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Results

Tables 1 and 2 list the types and sites of malignancies in the two series. There were 210 malignancies in the group from Taiwan while only 133 malignancies were found in the autopsies studied at Little Rock. Thus 46.6% of the necropsies from Taiwan represented malignancies while 29.5% of the autopsy population in Little Rock had malignant neoplasms.

It is readily apparent that there is a great difference in the types of neoplasms in the two population groups. Primary liver cell carcinoma, squamous cell carcinoma of the esophagus, adenocarcinoma of the stomach and nasopharyngeal carcinoma were amongst the common neoplasms encountered in Taiwan. Lymphoma and leukemia and lung cancer were common to both groups. Adenocarcinoma of the pancreas, adenocarcinoma of the prostate and adenocarcinoma of the colon were more common in the post mortems from the United States.

TABLE 2

TYPE AND SITE OF MALINGNANCY IN LITTLE ROCK

Type	*Site*	*Number*
Leukemia & Lymphoma	Lymphohematopoietic	31
Squamous Cell, Adenocarcinoma & Undifferentiated Carcinoma	Lungs	29
Adenocarcinoma	Pancreas	17
Adenocarcinoma	Colon	8
Adenocarcinoma	Prostate	7
Squamous Cell Carcinoma	Esophagus	7
Adenocarcinoma	Stomach	7
Hepatoma	Liver	5
Astrocytoma	Brain	4
Squamous Cell Carcinoma	Larynx	2
Cortical Carcinoma	Adrenals	2
Transitional Cell Carcinoma	Urinary Bladder	2
Squamous Cell Carcinoma	Skin	2
Adenocarcinoma	Thyroid	2
Adenocarcinoma	Kidneys	2
Pheochromocytoma	Adrenal	1
Islet Cell Carcinoma	Pancreas	1
Adenocarcinoma	Breast	1
Ependymoma	Brain	1
Nephroblastoma	Kidney	1
Adenocarcinoma	Site Undetermined	1
	Total	133

Discussion

The higher incidence of hepatomas in Southeast Asia and Africa south of the Sahara desert has been reported on numerous occasions.[3,7] The reasons for the increased incidence of primary liver cell carcinoma is not so readily apparent. Numerous etiologic agents have been suggested to play a role in the induction of liver tumors.[3] The presence of trace elements and iron in the diets of Bantus has been suggested as a possible cause, yet with no good evidence. The ingestion of ethanol has similarly been suggested in the etiology of hepatomas but again with little evidence. There is fairly good evidence that infestation with the liver fluke (Clenarchis Sinensis) is associated with an increased incidence of cholangiocarcinoma. This fluke infestation is reported to be responsible for biliary hyperplasia which progresses to cholangiocarcinoma, especially in the Cantonese in Hong Kong. However, the majority of liver cell tumors are hepatocellular rather than cholangiolar.

The high incidence of infectious hepatitis in the Orient can be readily documented, while the incidence of anicteric hepatitis is currently unknown. Serial liver biopsies on patients with infectious hepatitis over a period of years has demonstrated a progression to postnecrotic (posthepatitic) cirrhosis. The postnecrotic cirrhosis may then further progress to a hepatoma.

On the other side of the coin, there is general agreement that primary liver cell carcinoma is almost invariably preceded by cirrhosis. Indeed, the great majority of hepatomas arise with postnecrotic cirrhosis and less commonly with hemochromatosis and portal (Laennec's) cirrhosis. The association of hepatoma with biliary cirrhosis is rarely encountered.

The role of Schistosoma Japonicum as causative of hepatomas seems remote. Approximately 10% of the Taiwan group demonstrated S. Japonicum in their livers. This was frequently associated with a pipestem type of portal fibrosis and portal hypertension. However, no direct relationship with hepatomas was apparent from this study.

The increased incidence of esophageal carcinoma in Southeast Asia was originally considered to represent a racial predilection. Currently, it is generally agreed that this increased attack rate of esophageal cancer is due to environmental factors. It has been proposed that esophageal carcinoma is associated with a disturbed physiology so that ingested liquids and foods are in contact with the mucosa for longer periods than normal. An increased incidence of cancer of the esophagus has been reported with congenitally short esophagi, achalasia, esophageal diverticula, Plummer-Vinson syndrome, hiatal herniae and lye strictures.[1,9,10] The ingestion of smoked fish by Icelanders has been reported to be associated with a high incidence of esophageal carcinoma also. We shall mention another possible etiologic factor after discussing nasopharyngeal and gastric carcinoma.

The highest death rate in the world from gastric carcinoma is reported from Japan and Chile. The mortality rate of gastric cancer is also exceedingly high in Iceland. Interestingly, the incidence of gastric carcinoma is lower in Japanese immigrants than in those living in Japan. A study from Hawaii showed a higher incidence of gastric carcinoma (males and females) in individuals of Japanese origin than that in Caucasians and Hawaiians, albeit lower than in Japan.

The ingestion of very hot foods has been suggested as a factor in inducing gastric carcinoma.[7] There is a reportedly higher incidence of peptic ulcers in Japanese than in Caucasians. However, it seems unlikely that these ulcerations are frequently associated with a neoplastic transformation. There is also reported to be a higher incidence of blood type A amongst the Orientals. It has been generally agreed that there is a higher incidence of gastric carcinoma in patients with blood group A. We shall return to the possible role of the types and preparation of foods in the Far East.

The incidence of gastric cancer among Caucasians has been declining over the last few decades.[7,8,9] This would appear to represent an absolute decrease in incidence. On the other hand, colonic carcinoma has been increasing in attack rate among Caucasians.

Nasopharyngeal carcinoma is decidedly more common in Southeast Asia than in the United States of America.[2,5] The highest reported incidence of nasopharyngeal cancer (13.9% of all malignancies) to the author's knowledge was reported among the Chinese residing in Indonesia. The wood used for cooking fires in badly ventilated rooms has been proposed as an etiologic agent in Kenya. Specimens of soot from woods of the Mimosa family have been found to con-

tain significant amounts of benzanthracene and other polynuclear aromatic hydrocarbons.

The high incidence of nasopharyngeal, esophageal and gastric carcinomas in the native population of Southeast Asia, including the Taiwanese, should stimulate conjecture regarding the cause or causes. It seems probable that some agent or agents coming into prolonged contact with the nasopharyngeal, esophageal and gastric mucosae might be responsible. The ingestion of excessively hot foods and liquids has been previously alluded to. It has long been recognized that carcinoma of the skin of the lower abdomen may be associated with the carrying of burning charcoal baskets in this region among certain natives of Kashmir. Similarly, in certain parts of India, the Chuttas smoke with the lighted end in the mouth and frequently develop carcinoma of the palate.

A common method of preparing food in the Orient is the use of an open fire with an Hibachi or some similar heating device. Charcoal or wood is the usual fuel employed. It is a common sight to see large amounts of smoke issuing from food prepared in this manner. It seems conceivable that carcinogenic hydrocarbons might contaminate the food and then come into contact with the mucosa of the upper alimentary canal. It would seem that studies for carcinogenic materials in foods so prepared might be productive.

The relatively high incidence of leukemia, lymphoma, and lung cancer in both populations seems valid. There would appear to be a worldwide increase in the attack rate of leukemia and lymphomas. The slightly lower incidence of lung cancer in Taiwan may be attributable to the less frequent smoking of cigarettes.

Summary

Four hundred fifty consecutive post mortems on adult males were reviewed from Taipei, Taiwan, and Little Rock, Arkansas. The Taiwanese group showed a 46.6% incidence of malignancies while the Little Rock group accounted for only a 29.5% incidence. Primary liver cell carcinoma, squamous cell carcinoma of the esophagus, bronchiogenic carcinoma, leukemia and lymphoma, adenocarcinoma of the pancreas and nasopharyngeal carcinoma were the most frequent neoplasms encountered in the Taiwanese group. Leukemia and lymphomas, bronchiogenic carcinoma, adenocarcinoma of the pancreas and colon were the most common malignancies in Little Rock.

Environmental factors are discussed as representing the differences in incidence and primary site of the neoplasms in the two groups. Particular attention is paid to the role of infectious hepatitis and its sequelae in the causation of hepatomas. The high incidence of nasopharyngeal, esophageal and gastric malignancies in the Tawainese group is suggested to represent contact of the mucosae with carcinogens produced in the preparation of foods.

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Use of Oral Mannitol in Edematous Patient

J. W. James and R. A. Evans (Repatriation General Hosp, Concord, Australia)

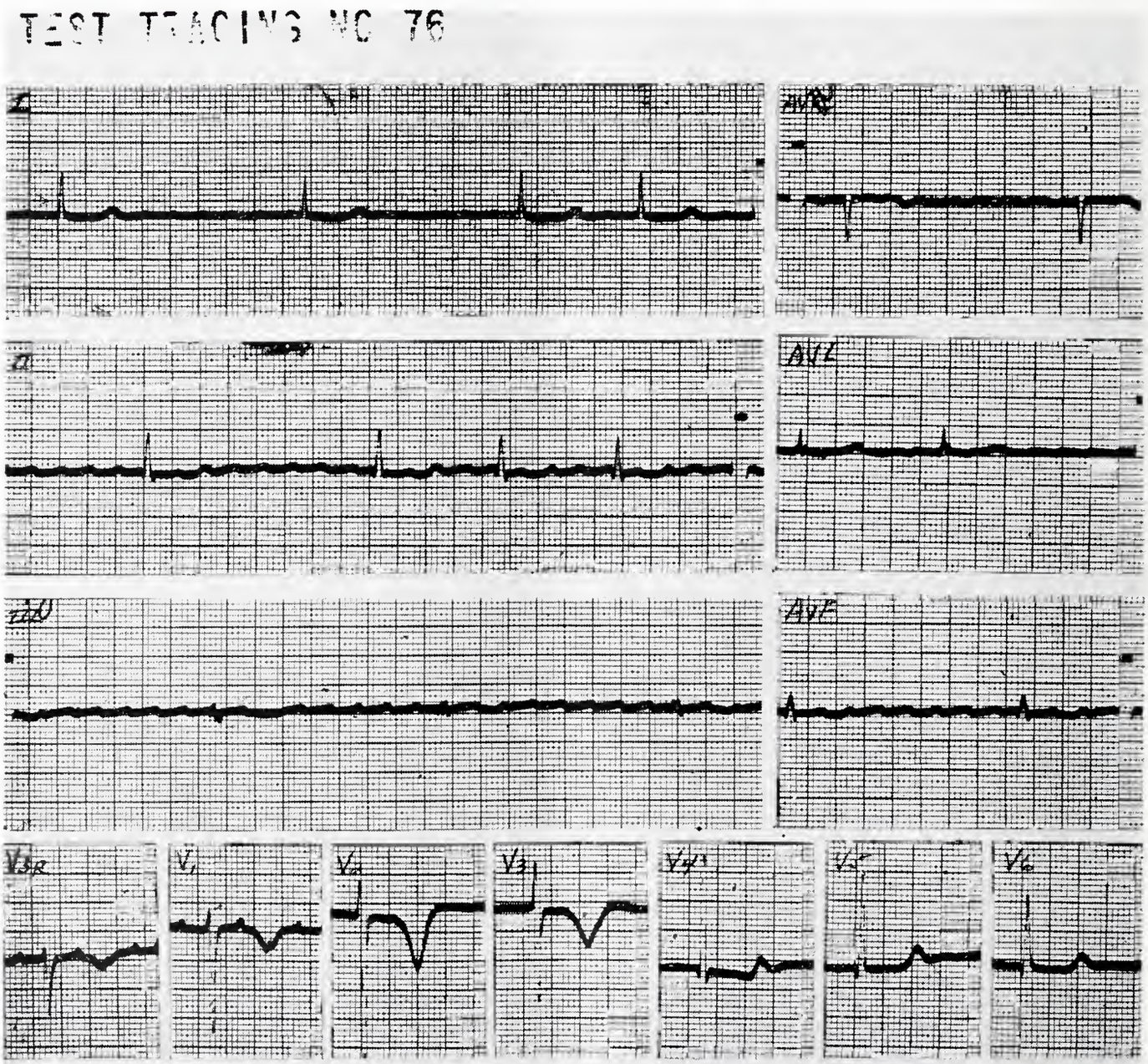
Brit Med J 1:463-464 (Feb 21) 1970

Oral mannitol, 200 gm in one liter of water, was taken on 24 occasions by 16 patients with intractable edema (cardiac, renal, or hepatic) and the resulting osmotic diarrhea produced a mean weight loss of 3 kg. There was little effect on serum potassium level, but in hyponatremic patients a rise in serum sodium usually occurred; fetal electrolytes were also estimated. The indications, method of administration, and complications of the proceuure are described.

ELECTROCARDIOGRAM OF THE MONTH

AGE: 76 SEX: Male BUILD: Medium BLOOD PRESSURE: 160/164
CARDIAC DIAGNOSIS: Congestive failure due to arteriosclerotic heart disease?
OTHER DIAGNOSES: None.
MEDICATION: Digitalis; amount not stated.
HISTORY: None available.

See Answer on Page 142



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 142

By Ed L. Pointer, M.D.

HISTORY: This eight-year-old white male had pain in the thigh for five years. The pain was worse at night and was relieved by aspirin.

PH

PUBLIC HEALTH AT A GLANCE

Emergency Medical Technician Concept

Highway Safety Program Standard No. 11 and the NAS-NRC guidelines on the training of ambulance personnel reflect a concept of the role and status of ambulance drivers and attendants that is considerably different from what actually exists in a great majority of communities today. A commonly held idea that ambulance services are designed to rush the sick or injured to a hospital as quickly as possible does, unfortunately, very often reflect what actually happens.

The medical profession recognizes that to have sophisticated lifesaving techniques and equipment in hospitals is useless to individuals who are dead on arrival and that emergency treatments have little opportunity to succeed when applied to a patient whose condition has deteriorated badly by the time he reaches the hospital. Emergency medical care techniques therefore need to be started at the scene of an emergency and before a patient's condition has had time to deteriorate irreversibly. Adequate techniques of caring for emergency patients require much equipment and depend on individuals with knowledge and skill who can recognize the seriousness of a patient's condition or the extent of his injuries, alleviate or stabilize a patient's condition and move a patient in ways to avoid further injury or aggravation. Untrained or inexpert handling and transporting of an emergency patient can cause additional serious injury or deterioration in his condition and thereby defeat a well-meaning attempt to rush him to the hospital.

The new Highway Safety Program Standard No. 11 requires that all emergency ambulances be equipped with a minimum of certain lifesaving equipment and manned by at least two trained men. It clearly identifies the responsibility of ambulance services to provide more than transportation, namely to bring skilled emergency medical care to emergency patients, to stabilize their conditions as much as possible and only then to take them expeditiously and safely to the hospital.

The Department of Transportation has recognized the need for widespread training programs to instruct all ambulance personnel in the necessary emergency medical care procedures. But the transformation and upgrading of inferior services across the country is not something that will occur overnight. The development of a common basic training course is an essential first step in an extended program to increase the professionalism of ambulance personnel.

Needless to say, the low pay scale for ambulance personnel is a major factor contributing to today's problem. While training alone will not necessarily guarantee increased pay, it seems reasonable to assume that a career ladder developed around an effective training program will enhance emergency medical care and the professional status of ambulance personnel, thereby justifying increased pay scales and facilitating the recruitment and retention of qualified personnel.

Training will have to be made available to the people already engaged in ambulance work, whether they be volunteers or employees of municipal or private companies, and also to aspiring and new entrants to ambulance service. Individuals will need refresher courses to maintain their skills and/or keep their knowledge of emergency medical care techniques up-to-date. Interested and capable individuals should be able to take and receive credit for more advanced training in emergency medical care or related topics. In order to attract and keep the caliber of personnel needed to learn and render skilled emergency care under all possible condi-

tions, ambulance work must be recognized as a paramedical career specialty and one which provides qualified individuals with the challenges, rewards, and opportunities for advancement of a professional career.

The development of a career structure for ambulance drivers/attendants rests on an expansion of the responsibilities and skill requirements for ambulance personnel. Crews must learn to use modern emergency medical care techniques at the scene of emergencies, during transport, and when appropriate, in hospital emergency rooms. The concept of a career structure rests also on the expectation that as people come to recognize the important role played by ambulance personnel as the first component of an emergency medical care system, present legal barriers will be lowered and individuals with advanced training will be allowed to practice additional lifesaving and emergency treatment procedures (such as the administration of IV's, certain medication, etc.). Similarly, interested and capable individuals might be expected to advance their careers by taking specialized training in new electronic patient monitoring and treatment techniques, inhalation therapy and other related specialties. Consequently, the idea of a paramedical career specialty in emergency care includes the notion that, with experience and advanced or specialized training, individuals will not be limited to working on ambulances but could learn to work as an emergency room technician, inhalation therapist, an assistant in a cardiac resuscitation team, etc. In addition, the title of ambulance driver/attendant should be changed to Emergency Medical Technician to reflect the increased status of the position. This has been recommended by the NAS-NRC and endorsed by many professional organizations.

To qualify as an emergency medical technician an individual will have to meet certain formal entrance qualifications, with respect to age, education and health. He should be able to speak, read, and write English and should possess a valid driver's license. He should be required to take and pass an approved basic training course. Before qualifying as an independent emergency medical technician, a new entrant should also, we believe, have to work under supervision as an intern in emergency medical care on an ambulance or in the emergency department of a hospital to acquire practical experience and on-the-job training.

The medical content of any nationwide training course in emergency medical care for paramedical personnel must be approved by the medical profession and taught under the supervision of and preferably by local medical authorities. However, a basic training course for ambulance personnel must also include material on the nonmedical aspects and operating skills of ambulance work. Consequently, representative national organizations of ambulance service personnel should cooperate with the medical profession to establish uniform standards of training in these nonmedical skills, and agree on a code of ethics for ambulance personnel. A number of professional organizations have endorsed the recommendation of the American Society of Anesthesiologists that a National Registry of Emergency Medical Technicians, qualified for ambulance and/or emergency department duties, should be established.

The impetus for upgrading the training of ambulance personnel has come from the medical profession and others concerned with the low level of medical care that is too often provided by ambulance services in many parts of the country. Therefore, it is natural that the emphasis of any new training course should be placed on medical care. However, ambulance crews must not only care for the patients in an emergency but also deal with the patients' relatives and friends, bystanders, the police, and other officials, secure the safety of the emergency scene, observe and preserve evidence of suicides, plan equipment and procedures to care for patients in or to remove patients from inaccessible locations, maintain communications with a dispatcher and/or hospital, record a variety of information, participate in disaster planning and exercises, and drive the ambulance safely and expertly under all conditions of weather, traffic, and terrain. At all times, ambulance crews' primary concern should be to bring expert emergency medical care to the victims of emergencies and to transport them safely and expeditiously to the hospital, but they have to be able to accomplish these duties unsupervised, in a great variety of circumstances and often under considerable physical and emotional stress.

The concept of an emergency medical technician qualified for ambulance work is, therefore, of a man capable of exercising his technical skills with authority and good judgment under difficult and stressful conditions. The personal

qualities of stability, leadership, and judgment are perhaps relatively more important for the technician on an ambulance than for the technician working under medical supervision in a hospital emergency room.

Thus, the essential elements of the proposed concept for an emergency medical technician are as follows:

A career pattern which progresses from basic to advanced with opportunities for specialization.

Formal training and education in both the medical and operational aspects of emergency care conducted under the supervision of the medical profession with the cooperation of national organizations of ambulance personnel.

Supplementary on-the-job training.

Continuing education on a daily basis.

Periodic refresher training.

Recognition as a professional in the paramedical field.

Certification, licensing and a national registry.

Sexual Activity in Postcoronary Patients

H. K. Hellerstein and H. Friedman (2065 Adelbert Rd, Cleveland)

Arch Intern Med 125:987-999 (June) 1970

Sexual activity decreased comparably with age in 48 middle-aged, middle-class men with arteriosclerotic heart disease (ASHD) and in 43 who were judged normal coronary-prone. In 58% (28) of the subjects with ASHD, it decreased further after the development of a myocardial infarct. Symptoms of coronary insufficiency infrequently influenced return to sexual activity. The cardiovascular cost of conjugal sexual activity with mates of 26 years was relatively low. Sexual activity was favorably influenced by physical fitness. Counseling about sexual activity for patients with ASHD must include both physical and psychological factors. A physiological measure to test the adequacy of the advice may be obtained by electrocardiographic electromagnetic tape-recording monitoring of sexual activity in the privacy of the individual's home ("sexercise" tolerance test). This was performed on a subsample of 14 men with ASHD.

ANSWER—Electrocardiogram of the Month

A: 290

RATE: V: App. 40 RHYTHM: Atrial tachycardia (impure flutter)

PR: Variable QRS: .07 sec. QT: 50 sec.

SIGNIFICANT ABNORMALITIES:

P waves vary slightly in form, rate of 290.

Prolonged Q-T interval.

INTERPRETATION: Abnormal

Atrial tachycardia (flutter-fibrillation?) c marked block, ventricular rate app. 40. Possible digitalis, Hypocalcemia.

House-Dust Mite Asthma

M. K. McAllen, E. S. K. Assem, and K. Maunsell (Univ College Hosp, London)

Brit Med J 2:501-503 (May 30) 1970

Quantitative challenge tests with *Dermatophagoides pteronyssinus* extract were performed on 28 dust asthmatic patients on the skin, nose, bronchi, and leukocytes, and on normal lung tissue passively sensitized by patients' serum. Positive reactions in all tissues could be produced by very small amounts of mite extract, but there was no fixed pattern between the measured degrees of sensitivity of the different tissues in the same patient.

ANSWER—Radiology Case of the Month

DIAGNOSIS:

Osteoid asteoma.

DISCUSSION:

There is an irregular area af radiolucency within the the cortex of the medial upper shaft of the left femur just below the lesser trochanter. The lesion is surrounded by sclerosis and periosteal new bone formatian. The lesian is typical of an asteoid osteama.

Osteaid osteoma usually develops between ages 10 and 30. It is seen more cammonly in males than in females. The tibia ar femur is the usual site, although any bone including vertebrae may be involved. Pain at night, relieved by aspirin, point tenderness, and limping are cammon symptoms. Pain may be present for months befare changes accur on roentgenograms. Definitive treatment consists of surgical removal.

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EDITORIAL

Care of the Terminally Ill

Robert J. Smith, M.D.*

It is a challenge to all the resources of the practicing physician to care for a patient who is dying of an incurable disease. All of the training in the specialties, therapeutics, and psychiatry will be demanded of him. It is easy for a surgeon to take care of a patient critically ill from a perforated appendix. With his training in pathophysiology of disease, he can skillfully administer fluids, appropriate antibiotics, and at the appropriate time, perform surgery. Each of these steps is purposeful and has an attainable goal. All of this can be imparted to the patient who is in severe pain, anxious, and may be just as likely to die as a terminally ill patient (occasionally one does die). The one factor which separates this patient from the terminally ill is the hope of a cure and the diligence and enthusiasm of the surgeon. Most physicians have seen patients take on a new attitude toward their pain or very serious condition by a few words from a doctor whom they believe can help them. All of a sudden the unbearable pain becomes bearable, the "dismal" situation becomes brighter, and this often occurs before the antibiotic has had time to take effect. Could it be that the change occurs because the patient sees an end to his suffering in the near future?

If physicians caring for the terminally ill exhibited the same enthusiasm and were prepared for less than a 100% cure, would the results be better? A basic human characteristic is to strive for success in all endeavors. In reality, however, medical practitioners often must be satisfied with less than optimal results. The individual patient remains important and demands as much from his physician and perhaps more. Because the patient has a recurrence of his cancer and will spoil our series and statistics is not reason to relegate his care to the junior house officers.

In caring for terminally ill patients, I have often been impressed with their change in goals as time advances. First, I never tell a patient there is no hope and rarely do I find it necessary to tell them they have cancer. What can be done to help the patient at that moment? Often if the doctor gets past his own anxieties in dealing with this patient, he will find some definite steps that can be done to alleviate the patient. As the illness progresses, the truth dawns on all of these patients and at a point most become ready to accept death.

This era of scientific medicine has many advantages over the horse and buggy doctor, yet he had the confidence of the patient, respect and empathy with the family, and could instill hope in the dying. This art is worth holding on to. It may be called the art of medicine, but with it perhaps our profession could regain its high regard of yesteryear. The author does not propose any of these ideas to be original, they are as old as the good physician, St. Luke.

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MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

An American Medical Association proposal for peer review for the Medicare and Medicaid programs drew favorable reaction from members of the Senate Finance Committee.

Peer review was one part of a three-point program which Dr. Gerald D. Dorman, the outgoing president of the AMA, offered in testimony at a Senate Finance Committee hearing on Medicare and Medicaid.

Dr. Dorman and Dr. Julius W. Hill, president of the National Medical Association, testified together. They jointly urged on behalf of their organizations that Congress replace Medicaid with a national health insurance program subsidized by the federal government.

The AMA health insurance proposal, which initially was approved by the AMA House of Delegates in 1968, was similar to the plan President Nixon included recently in his proposed revised new national welfare program. He said he would send such legislation to Congress early next year.

Congress is not expected to take up this year proposals for national health insurance. But reaction to the peer review proposal was highly encouraging, and prospects for Congressional approval this year appeared good. Sen. Wallace F. Bennett (R., Utah), a finance committee member, directed the committee's staff to work with AMA staff representatives in drafting such legislation as an amendment to a bill revising Medicare and Medicaid.

The presidents of the AMA, with 223,000 members, and the predominantly Negro NMA gave assurances at the finance committee hearing of the medical profession's cooperation in solving the nation's health care problems. It was the first time that spokesmen for the two leading medical associations had testified together before a Congressional committee.

Dr. Dorman said "the medical profession hopes to see the nation pursue" the three-point program in efforts to provide quality health care for everyone as economically as possible.

Dr. Hill said the insurance plan would work better than Medicaid in the ghettos. He also defended physicians against accusations that they have been profiteering under Medicaid and Medicare.

The first two parts of the AMA program comprised the association's "medicredit" health insurance plan. The third, peer review, "is a way to assure both scientific quality and economic reasonableness in the medical and health care people get," Dr. Dorman said.

"Our first program would meet the problems of the Title XIX Medicaid program," Dr. Dorman said. "Under our plan, each low income person or family would receive a certificate for the purchase of a qualified and comprehensive health insurance plan. The protection would be theirs without expense or contribution since the cost of the program would be borne entirely by the federal government.

"The second offers tax credits, on a sliding scale based on the tax liability of a family, for the purchase of qualified health benefits coverage. For those with moderate or higher levels of income, the program would provide cash incentives, through income tax credits, to encourage them to protect themselves against major health care costs.

"The third part of our program calls for a structured peer review mechanism to insure high quality of care and to prevent abuses of the Medicare and Medicaid programs."

Dr. Dorman noted that the committee's staff in a report last February on Medicare-Medicaid suggested that organized medicine regulate itself.

"We agree, and propose a program providing for professional review of matters bearing on reasonableness of charges for, need for, and the quality of services rendered by, the provider of medical or other health services," he said.

In a speech on the Senate floor, Bennett said there is deep concern over the high costs of

Medicare and Medicaid. He complimented the AMA on advancing peer review as a means of curbing these costs. He said:

"I believe the American people are justifiably concerned over the tremendous costs of health care. Much of that concern, it seems to me, is a product of a very real feeling that we are not getting what we are paying for. I believe, equally, that much of the apprehension, anxiety, and suspicion now prevalent—for better or worse—with respect to those responsible for health care would disappear if professional standards review organizations were established and functioned effectively. It seems to me that the American people are entitled to know that American medicine shares their concern—and more importantly—proposes to do something substantial about it through means of professional standards review organizations. . . .

"I believe that physicians, properly organized and with a proper mandate, are capable of conducting an ongoing effective review program which would eliminate much of the present criticism of the profession and help enhance their stature as honorable men in an honorable vocation willing to undertake necessary and broad responsibility for overseeing professional functions. If medicine accepts this role and fulfills its responsibility, then the Government would not need to devote its energies and resources to this area of concern. Make no mistake: the direction of the House-passed Social Security bill is toward more—not less—review of the need for and quality of health care. I believe my amendment would provide the necessary means by which organized medicine could assume responsibility for that review."

Bennett said that, under his amendment, review groups would have responsibility for reviewing "the totality of care provided patients—including all institutional care." That responsibility he said, would be lodged, "wherever possible and wherever feasible," at the local community level. He said:

"Local emphasis is necessary because the practice of medicine may vary, within reasonable limits, from area to area, and local review assures greater familiarity with the physicians involved and ready access to necessary data. Priority should be given to arrangements with local medical societies—of suitable size—which are willing and capable of undertaking comprehensive professional standards review. . . .

"Under the amendment, the Secretary (of Health, Education and Welfare) could use state or local health departments or employ other suitable means of undertaking professional standards review only where the medical societies were unwilling or unable to do the necessary work, or where their efforts were only pro forma or token. Let me emphasize as strongly as possible that the thrust of this proposal is to have physicians, as a group, evaluate physicians and the services they provide and order as individuals."

Bennett said that the review committees should determine that only medically necessary services are provided by physicians, hospitals, nursing homes and pharmacies, and that these services meet proper professional standards.

Disciplinary measures, he said, would be in proportion to the offense and could include: (1) monetary penalties, (2) suspension from federal programs, (3) exclusion from federal programs, (4) civil or criminal prosecution, and (5) steps leading to the suspension or revocation of professional licensure.

Dr. Hill directed his testimony before the finance committee mainly to medical care of the blacks and other poor people, particularly in ghettos. He took issue with the committee staff report which, he said, "by implication attacked the very physicians working closest to the poor and treating them." He said restrictions upon physicians' fees, as advocated in the report, would make more acute the already critical shortage of physicians in ghettos.

"To those who read the entire report, there were a number of very complimentary things said about all physicians," Dr. Hill said. "But the primary message, the one seized upon by the press and broadcast across the country, appeared to be that any doctor earning a substantial amount of money from Medicare-Medicaid was somehow cheating both the government and his patients.

"It was bitterly ironic. To work 60 and more hours a week in the ghetto, and to be fairly paid, was suddenly prima facie evidence of wrongdoing.

"The report was also interpreted so that the blame for the rising cost of Medicare-Medicaid was directed at the physician—and particularly those caring for the poor.

"Therefore, we of the National Medical Association take strong exception. The implications

and accusations of that report were grossly unfair. It is difficult enough to get physicians to practice among the poor. . . . If these men, professionals committed to providing care, are to be subjected to irresponsible accusations for the size and success of their ghetto practice, it will very soon be impossible to find a doctor among the American poor."

The associations showed the senators a brief movie of physicians practicing in a Chicago ghetto health center and in an Appalachian community clinic.

* * *

The National Communicable Disease Center of the U. S. Public Health Service said that not a single death from polio was reported in the nation last year.

It was the first time no death from the disease was reported since 1955 when regular polio surveillance was started. In addition to the absence of a death, the total number of cases of paralytic polio was only 19.

Before the introduction of polio vaccine during the mid 1950's, annual paralytic cases went as high as 21,300 with 1,400 deaths. The number of cases began to dwindle after use of the vaccine became widespread, and 1960, with 230 cases, was the last year when the number of deaths exceeded 100. In recent years, the death toll usually has been between 10 and 20.

Among the 19 paralytic cases last year, only one occurred in a person who had received a full series of anti-polio doses. The exception was a two-year-old suffering from an inborn inability to form protective antibodies against bacteria and viruses.

An estimated 26.5 million doses of vaccine, most of it the oral type, was administered nationwide last year.

A federal health official warned that small outbreaks of polio still are possible in city slums and other areas where it is difficult to achieve 100 per cent immunization. There already have been 11 known cases and one death in the Rio Grande Valley citrus growing region of Texas where there was a problem of convincing parents of the need for immunizing.

OBITUARY

Dr. Evan G. Houston

Dr. Evan G. Houston died July 19, 1970, at the age of fifty-three.

Dr. Houston had practiced medicine twenty-three years in Magnolia before retiring from private practice to join the Veterans Administration Hospital of Little Rock, just prior to his demise.

He was a 1941 graduate of the University of Arkansas School of Medicine and a member of the Columbia County and Arkansas Medical Societies.

Dr. Houston is survived by his widow, Mrs. June Davis Houston, one son and two daughters.

Dr. John Marshall Robinson

Dr. John Marshall Robinson of Little Rock died July 19, 1970. He was ninety years old.

Born in Pickens, Mississippi, Dr. Robinson received medical education from both Meharry Medical College (Nashville, Tennessee) and also from Knoxville Medical College (Knoxvile, Tennessee), graduating from the latter as valedictorian of his class.

He was the founder of Bush Memorial Hospital and recipient of the Certificate of Merit of the A. M. S. in which he held membership. He also was a staff member of the Arkansas Baptist Medical Center and the St. Vincent Infirmary.

Survivors include his wife Mrs. Myrna H. Robinson, two sisters, a granddaughter and two great-granddaughters.

THINGS TO COME

Family Practice Examination

The American Board of Family Practice announces that it will give its SECOND examination for certification in various centers throughout the United States over a two-day period on February 27-28, 1971.

Information regarding the exam and eligibility for same can be obtained by writing:

Nicholas J. Pisacano, M.D., Secretary-Treasurer
American Board of Family Practice, Inc.
University of Kentucky Medical Center
Annex No. 2, Room 229
Lexington, Kentucky 40506

Please Note: Deadline for receiving completed applications in the Board office is November 1, 1970.

University of Florida to Hold Seminar

The University of Florida College of Medicine will hold an Obstetrics and Gynecology Seminar November 19-20, 1970.

Guest speakers will be: Lawrence L. Hester, M.D., Professor and Chairman, Department of Obstetrics and Gynecology, Medical College of South Carolina; and William Normal Thornton, Jr., M.D., Professor and Chairman, Department of Obstetrics and Gynecology, University of Virginia School of Medicine.

For details contact Division of Postgraduate Education, J. Hillis Miller Health Center, Box 758 College of Medicine, Gainsville, Florida 32601.

University of Miami Offers Postgraduate Course

The University of Miami School of Medicine, Department of Otolaryngology, is presenting a postgraduate course entitled "Otolaryngology for the Family Practitioner." Accredited by the AAGP, the program date is November 13-14, 1970. For information write:

Frederic W. Pullen, II, M.D.
Neuro-Otologic Laboratory
University of Miami School of Medicine
Post Office Box 875, Biscayne Annex
Miami, Florida 33152.

Interstate Assembly Dates Announced

The Interstate Postgraduate Medical Association of North America will have its annual assembly November 2-5, 1970, at the Palmer House in Chicago. Information and advance registration may be had by writing:

Roy T. Ragatz
Executive Director
Interstate Postgraduate Medical
Association of North America
307 N. Charter Street
Madison, Wisconsin 53715

Health Activity Winners Announced

Winners of "Health Activity," held in connection with State 4-H Club Day (July 24, 1970), were recently made known by Carthel T. Pinkston, State Extension Health Education Specialist. In a special awards ceremony, Dr. Ben N. Saltzman of the Arkansas Medical Society presented watches to: Judy Hutchison, Mountain Home, for "Health Careers" and Linda Watson, Wesley, for "Drug Abuse." (See photo this Journal section)

Scleral Changes During Diathermy Application

H. F. DeGuillebon, D. Eng, and Y. Ishii (Library, Retina Foundation, Boston)
Arch Ophthal 83:752-759 (June) 1970

Three degrees of scleral damage were observed when heating sclera in physiological saline formation: formation of vacuoles at 50 C, fragmentation of collagen bundles at 59 C, and denaturation of collagen at 65 C. The same degrees of damage were found after diathermy application. The gradient of temperatures indicated by the silver-stained cryosections demonstrates the pathway of the electric current through sclera. A point electrode produces high temperatures at the point of contact with sclera. With a flat electrode, the electric current flows along the periphery of the metallic electrode and scleral damage is more prominent along the edges of the electrode. Scleral damage can be decreased with a cuff of saline solution around the electrode.

PERSONAL AND NEWS ITEMS

Mrs. Edna Robins, Chicago, formerly of Camden, Arkansas, was Chairman of the Installation Luncheon of the Woman's Auxiliary of the Norwegian-American Hospital, Chicago, Thursday, June 25, 1970, at The Homestead Restaurant. Featured luncheon speaker was Dr. Winston K. Shorey, Dean, University of Arkansas School of Medicine. Also a guest and speaker was Mrs. Louis K. Hundley, Assistant to the Dean of the University of Arkansas School of Medicine for Alumni Affairs. Mrs. Hundley is a former President of the Arkansas and Southern Medical Women's Auxiliary.

Dr. R. B. Robins is Director of Medical Education for the Norwegian-American Hospital and formerly practiced in Camden, Arkansas.

Dr. Jones Honored for Thirty Years of Service

Dr. Curtis Jones, Sr., was honored by fellow Rotarians of the Benton-Bauxite Rotary Club with a dinner meeting in his honor this past summer for his thirty years of service as a physician.

Dr. Jerome Levy of Little Rock was the guest speaker for the occasion.

Medical Society-Hospital Pays Tribute to Dr. M. C. Hawkins, Jr.

M. C. Hawkins, Jr., M. D., after announcing his retirement from thirty-seven years of medical practice, was honored by his colleagues, the White County Medical Society, who gave a reception for him in July. A week prior, the employees of the White County Memorial Hospital had honored him with a special retirement dinner and a plaque of appreciation.

Doctor Massey Has His Day

July 10th was the date that the citizenry of Osceola designated "Dr. L. D. Massey Day" as a demonstration of their gratitude and love for a man who has practiced the healing arts in their midst for fifty years.

Dale Evans, wife of western star Roy Rogers, made a special trip home to her native Osceola to be among those paying tribute to her uncle, Dr. L. D. Massey.

Dr. Daniel Attends Course

Dr. Sam V. Daniel of Conway was one of thirteen Arkansas physicians who attended a postgradute course in coronary care during July at the University of Arkansas Medical Center.

Fayetteville Physician Receives Promotion

Dr. Edwin Whiteside of Fayetteville has been recently promoted to the rank of major with the 188th Tactical Reconnaissance Group, Air National Guard, at Fort Smith.

Dr. Jackson Re-locates

Dr. William E. Jackson announced the opening of his new offices early in August in Rison. For the past two years he has practiced in Lewisville.

Physicians and Groups Announce New Associates

During this past summer, individual Society members or their groups have been joined by new associates which are as follows:

Dr. F. V. McEvoy is now associated with Rogers P. Edmondson, M. D. (Edmondson Clinic, Springdale);

Dr. Ralph E. Ligon is now associated with E. A. McCracken, M.D. (McCracken Clinic, Stuttgart);

Dr. Sanford Hutson has joined the staff of the Stuttgart Medical Clinic of Stuttgart;

Dr. James A. Capps, Jr., is now practicing with Drs. Stanley Applegate, John Dorman and John R. Power at Springdale Clinic in Springdale.

Both Dr. Milton Lubin (who formerly practiced in Turrell) and Dr. Donald F. Thompson have become staff members associated with the Medical Center of West Memphis.

Dr. Thomas Hansen (internal medicine) is now practicing with the Millard-Henry Clinic in Russellville;

Also in Russellville, the Gardner-Mobley-Lovell Clinic has been joined by Dr. Richard Lovell, practicing ophthalmology.

Newport Hospital and Clinic Chief of Staff, Dr. T. E. Williams, reports that Dr. J. W. Carney has recently become a staff member and resident of Newport; and

Doctors Beaton, Crain and Burks Professional Association of Wynne has added Dr. Robert D. Bethell to its staff as of August 10th.

Arkansas Physicians Published in Southern Medical Journal

"The Critical Angle after Vagotomy and Drainage Procedure for Hemorrhage," an article by Little Rock physicians Bernard W. Thompson and Raymond C. Read, appears in the August issue of the *Southern Medical Journal.*

Arkansas Medical, Dental and Pharmaceutical Association Holds Annual Meeting

The 77th Annual Meeting of the Arkansas Medical, Dental, and Pharmaceutical Association occurred in Hot Springs June 24-25. With sessions taking place in the National Baptist Hotel, the audience heard, among other distinguished guests, Dr. Aaron Henry of Clarksdale, Mississippi. About 100 members registered for the meeting. Incoming organization president is Dr. G. P. Freeman of Little Rock.

Dr. W. H. Lane Admitted to Family Practice Board

Dr. W. H. Lane, Jr., of Russellville, has been admitted to the American Board of Family Practice upon his July passing of that new specialty's certification examination.

Gentry Doctor to Relieve in South America

Dr. Bob Weaver of the Medical Center in Gentry left in early July for a month's service on the Davis Memorial Hospital staff in Georgetown, British Guiana.

NEW MEMBERS

Craighead-Poinsett County Medical Society announces three new members. They are Drs. William R. Eddington, John T. St. Clair, Jr., and Phillip M. Utley.

WILLIAM R. EDDINGTON, M.D., is a native of Clarksville. After graduating with the B. S. degree from the College of the Ozarks, located in Clarksville, he entered the University of Arkansas School of Medicine and received his M.D. in 1959.

Dr. Eddington interned at United States Naval Hospital, San Diego, California, and also completed a residency in Otolaryngology at that hospital. Board certification in Otolaryngology was conferred upon him in 1965, and he held a teaching appointment from the United States Naval Hospital in that specialty.

A former member of the United States Navy, Dr. Eddington currently is a member of the American Medical Association, and the American Academy of Ophthalmology and Otolaryngology.

Specializing in Otolaryngology, his office address is University Center in Jonesboro.

DR. JOHN T. ST. CLAIR, JR., was born in Athens, Tennessee.

After gaining his B.S. from Davidson College in Davidson, North Carolina, Dr. St. Clair became a 1963 graduate of the University of Tennessee College of Medicine in Memphis, Tennessee.

His internship was done at Methodist Hospital in Memphis before completing an Obstetrics-Gynecology residency at John Gaston Hospital, also located at Memphis.

Dr. St. Clair served in the United States Air Force from 1964 to 1966. Board eligible, he is a Junior Fellow, American College of Obstetricians and Gynecologists.

Specializing in Obstetrics and Gynecology, his office is at 810 Jeter Drive, Jonesboro.

PHILLIP M. UTLEY, M.D., is a native of Paragould.

His pre-medical education was obtained at Memphis State University, Memphis, Tennessee, graduating with the B.S. degree in 1960. After receiving his M.D. degree in 1963 from the University of Tennessee College of Medicine, located in Memphis, Dr. Utley then interned in the City of Memphis Hospitals.

From 1964 to 1966, Dr. Utley was a member of the United States Public Health Service before

returning to the University of Tennessee School of Medicine to do a residency in Ophthalmology, which was completed in 1969.

Dr. Utley now is located at 920 South Main Street, Jonesboro, where his type of practice is Ophthalmology.

Garland County Medical Society has added five physicians to its membership roll in recent months. New members are listed as Drs. Ermic Kenneth Gaston, Sr., George H. Hassard, William Ray Keadle, Gary Norton Meek, and William Y. Springer.

DR. ERMIC KENNETH GASTON, SR., was born in Cooke County, Texas.

He received his pre-medical education from Little Rock Junior College, Little Rock, Hendrix College, Conway, and the University of Texas in Austin. Dr. Gaston graduated from the University of Arkansas School of Medicine in 1966 and then interned at Arkansas Baptist Medical Center in Little Rock. A residency in Psychiatry was accomplished at the Veterans Administration Hospital in North Little Rock during 1967.

A former member of the United States Army, Dr. Gaston is in general practice at 626 Albert Pike in Hot Springs.

GEORGE H. HASSARD, M.D., is from Cedar Vale, Kansas. His B.S. degree was attained at Kansas State Teachers College. He received his M.D. degree from the University of Kansas School of Medicine, Lawrence, Kansas, in 1952.

Dr. Hassard interned at Manorah Medical Center, Kansas City, Missouri. A residency in Physical Medicine and Rehabilitation was done, spending one year in residence at the University of Oklahoma School of Medicine, Oklahoma City, Oklahoma, and two years in residence at Baylor University College of Medicine, Houston, Texas.

He has held teaching appointments in that specialty as a Clinical Instructor at both Baylor University College of Medicine and also at the University of Texas Southwestern Medical School, Dallas, Texas.

Board certified, Dr. Hassard is a Fellow of the American Academy of Physical Medicine and Rehabilitation and a member of the American Congress of Rehabilitation.

He now is Medical Director of the Hot Springs Rehabilitation Center in Hot Springs.

Born in Texarkana, Arkansas, DR. WILLIAM RAY KEADLE was educated at Hendrix College in Conway.

He was graduated from the University of Arkansas School of Medicine in 1955 and then interned at Arkansas Baptist Medical Center in Little Rock.

Dr. Keadle is a former member of the United States Navy and has formerly practiced medicine for two years in Stuttgart and for seven years in the state of California.

Now located at 408 Highway 8 in Glenwood, Dr. Keadle is a general practitioner.

From Hot Springs, DR. GARY NORTON MEEK received his pre-medical education at Hendrix College in Conway.

Graduating from the University of Arkansas School of Medicine in 1963, he then interned at the University of Arkansas Medical Center. Dr. Meek also completed a residency in General Surgery at that institution before serving two years active duty in the United States Air Force.

Board eligible, he is a member, Candidate Group, American College of Surgeons.

Dr. Meek's practice of General Surgery has its offices at 901 Medical Arts Building, Hot Springs.

DR. WILLIAM Y. SPRINGER hails from Little Rock. He also attended Hendrix College in Conway where his pre-medical education was accomplished.

Dr. Springer graduated from the University of Arkansas School of Medicine in 1963 and interned the following year at Jackson Memorial Hospital, Miami, Florida. Subsequently, he also finished a three-year residency in Radiology at that institution.

Dr. Springer spent two years in the United States Air Force.

With board certification pending, his practice of Radiology is located at 501 Medical Arts Building, Hot Springs.

Miller County Medical Society announces JACK W. HARRISON, M.D., a native of Wynne, as a new member.

After two years at Hendrix College in Conway, Dr. Harrison completed his B.A. at Southern Methodist University, Dallas, Texas. Mis M.D. was obtained from the University of Arkansas School of Medicine in 1961.

Upon completion of his internship at the University of Arkansas Medical Center, Dr. Harrison

also did a residency there in Obstetrics and Gynecology. Prior to his residency training, he served two years in the United States Army.

Board eligible, Dr. Harrison's type of practice is Obstetrics-Gynecology, with offices in the Southern Clinic, 401 East Fifth Street, Texarkana, Arkansas.

Another new member of the Miller County Medical Society is DR. HAROLD H. SHORT, who was born in Bradley.

Dr. Short first attended Southern State College in Magnolia and then finished his pre-medical education at the University of Arkansas, B.S., Class of 1954. His M.D. degree was conferred by the University of Arkansas School of Medicine in 1956.

Dr. Short interned at Grace Hospital in Detroit, Michigan before spending two years active duty with the United States Air Force.

He has been in general practice for the past ten years in Texarkana, Texas, where his office address is 1400 College Drive.

Dr. Saltzman to Serve on National Council

Dr. Ben Saltzman of Mountain Home has been invited by Health, Education and Welfare Secretary, Elliott Richardson, to serve on a National Health Advisory Council. Dr. Saltzman's three year term begins immediately.

Effect of Secretion and Cholecystokinin on Gastric Emptying and Gastric Secretion in Man

W. Y. Chey et al (Temple Univ Health Sciences Center, Philadelphia)

Gastroenterology 48:820-827 (June) 1970

The intravenous administration of secretion in a dose of 1 unit/kg body weight caused a significant decrease in gastric emptying measured 15 minutes after the intragastric instillation of 500 ml normal saline solution in ten human subjects. The mean percentage of gastric emptying following the administration of secretin was 40.7% (control value, 85.2%. A decrease in gastric emptying of similar magnitude was observed in nine subjects following the intravenous administration of cholecystokinin in a dose of 0.5 Ivy dog unit/kg. Gastric secretion of acid was stimulated by a continuous intravenous infusion of pentagastrin or histamine acid phosphate and both gastric and duodenal contents were collected simultaneously. The intravenous administration of secretin in a dose of 1 unit/kg resulted in marked inhibition of acid secretion stimulated by either pentagastrin, 0.12μg/kg/hr, or histamine acid phophate, 0.02 mg/kg/hr, in ten subjects. Secretin appeared to have a greater inhibitory effect on acid secretion stimulated by pentagastrin than on histamine-stimulated secretion. Inhibition of acid secretion similar in magnitude to that produced by secretin was observed following the administration of cholecystokinin 1 unit/kg. Gastric secretion of acid stimulated by pentagastrin, 6μg/kg/hr or histamine acid phosphate 0.04 mg/kg/hr was not influenced by the same dose of secretin.

Wenckebach and Mobitz Type II AV Block Due to Block Within the His Bundle and Bundle Branches

O. S. Narula and P. Samet (Mount Sinai Hosp, Miami Beach, Fla)

Circulation 41:947-966 (June) 1970

Fourteen patients with conduction defects were analyzed by using His Bundle (HB) recordings. In 12 patients with Mobitz type II AV block, the failure in impulse transmission for the dropped beats was localized distal to the recording site of the BH. Three of these 12 showed a normal QRS complex. In two of the latter three the QRS complexes during intermittent periods of complete heart block (CHB) remained unchanged, representing His Bundle rhythm with subsidiary pacemaker arising above the bifurcation of the BH. At any atrial rate (NSR or AP) conduction time through the AV node (AH) and His Purkinje system (HV) remained constant. With increasing atrial (A) rates during AP, the number of impulses blocked distal to the BH increased. At high AP rates Wenckebach phenomenon between A and BH occurred concomitant with block distal to the BH. Of the remaining two patients, in the one with Wenckebach type 2° AV block during NSR and a narrow QRS complex the delay was localized between the two recorded and validated BH potentials ("split" BH). The other patient, with 1:1 AV conduction during NSR and left bundle branch block, developed Wenckebach cycles during AP at 110 beats/min. The progressive delay in the PR interval was localized distal to the BH probably in right bundle.

TUBERCULOSIS ABSTRACTS

Sponsored by Arkansas Tuberculosis and Respiratory Disease Association

EXAMINATION OF SPUTUM CELLS

Microscopic examination of fresh wet sputum can provide reliable information on the diagnosis and prognosis of chronic bronchitis, bronchial asthma, and asthmatic bronchitis. It should be done routinely for all patients with these obstructive pulmonary diseases.

In patients with sputum production as part of a disease, one can glean information pertinent to the abnormality through the intelligent examination of this material. Sputum always implies some abnormal process of the bronchopulmonary system and the cellular and noncellular components reflect the pathologic process.

After a little experience in identifying the various leukocytes and mucosal epithelial cells in fresh wet sputum under the microscope, one can reasonably differentiate allergic from nonallergic inflammations. In the chronic "obstructive" bronchopulmonary diseases, one can differentiate chronic bronchitis (CB), chronic bronchial asthma (CBA), and chronic asthmatic bronchitis (CAB).

This report deals primarily with sputum cytologic examination in these chronic diseases. It should be kept in mind, however, that sputum examination supplements or reinforces other important diagnostic procedures, beginning with sound, thorough clinical evaluation, which includes roentgenographic studies and pulmonary physiologic testing as indicated. It is not a substitute for them.

COMMON CELLS IN SPUTUM

The more common cell types in sputum can be divided into those exfoliated from the bronchial epithelial layer, those arising from other pulmonary tissues, and those entering from the circulating blood. The numbers, types, and cytologic condition of the bronchial epithelial cells (BEC) reflect the abnormality of the bronchial mucosa.

Normally, the nuclei of all BEC's are ovoid to round, with a definite chromatin structure. Two nuclei may be seen in occasional cells.

The cytoplasm usually has a finely granular reticular texture. The basal BEC is small — usually about the size of the lymphocyte — and has the greatest nucleus-to-cytoplasm ratio. Its shape is generally ovoid, with a rather regular cytoplasmic border. Intermediate-layer BEC have a greater cytoplasmic mass with an irregular and more polygonal shape.

The columnar BEC that line the lumen are ciliated or, less commonly, the goblet type with its variable sized mucopolysaccharide vacuole. Both are roughly rectangular, often tapering to a long tail at one end. The nucleus often bulges out the cell membrane at this tapered end. The secretory system of the goblet cell is at the broader end, but may also bulge out the cell with its mucinous product.

The brush border of the ciliated BEC is also at this end, and the origins of hte cilia just beneath the cell membrane appear as a dark line. The cilia themselves are very delicate, hair-like structures about 5 to 7 μ long in these unfixed preparations.

Local cells of the reticuloendothelial system are seen in the sputum and are an index of the host's cellular resistance. The presence of alveolar macrophages or histiocytes in a specimen is the best assurance that it arises from the lower respiratory system.

Lymphocytes and monocytes in small numbers appear fairly regularly in sputum.

Often, material of unknown composition may be seen in the noncellular part of the sputum. The absence of nuclei and the bizarre "plastic" shapes that this material assumes separates it morphologically from cellular structures. This material is often referred to as "myelin degeneration."

Cells similar to histiocytes are frequently seen with a nucleus resembling that of a blood mono-

Sanford Chodosh, M.D., *The New England Journal of Medicine*, April 9, 1970 (Vol 282, No. 15).

cyte, from which it probably transforms. Plasma cells that are seen in sputum possess the round, eccentric nucleus with the characteristically dense chromatin, without the expected spokewheel effect.

Leukocytes from the circulating blood usually comprise the majority of all sputum cells and are a direct measure of the nature of the inflammation.

Cells in these wet preparations are seen in three dimensions without the artifact of fixation, so reorientation to this different perspective is necessary.

Included are the polymorphonuclear neutrophil (PMN) and the similar polymorphonuclear eosinophil (PME) cells.

In chronic bronchitis (CB) bronchial epithelial cells (BEC) may comprise 5 to 15 per cent of all cell types. Usually occurring singly, most show pyknotic degeneration. The cytoplasmic mass is often reduced. Bacteria are occassionally seen in the cytoplasm.

The basal BEC with darker nuclei are smaller and may have crinkled-cell membrane. The intermediate BEC are difficult to differentiate from pyknotic basal types. The ciliated BEC are small with dark nuclei. Cillia are rarely present but the basal plate of cilia remains.

In stable CB, histiocytes may comprise 5 to 20 per cent of all cell types; in acute exacerbation they may drop to below 5 per cent. Often yellowish-brown in color, histiocytes are commonly seen with ingested particles of dust, bacteria, and lipids.

The blood-transported PMN may comprise 75 to 95 per cent of all cell types, whereas PME may comprise less than 2 per cent.

Usually there is a 1 to 2 per cent concentration of monocytes, though it may rise to 5 to 15 percent while histiocytes are rising.

In chronic asthmatic bronchitis (CAB) tissue and blood cellular composition is most often the same as in CB, though some swollen BEC may be seen and the level of PME may rise to between 5 and 20 per cent.

In chronic bronchial asthma (CBA) BEC may comprise 10 to 30 per cent of cell types. Though single BEC are often seen, large clusters (Creola bodies) are more common during acute exacerbation. Hydropic degeneration (swelling) distorts the definition of the original morphology. Cytoplasm and nuclei of both basal and intermediate cells may be swollen.

Though cilia is usually present on swollen ciliated BEC, ciliacytophoria with loss of cytoplasm is often seen. Some goblet cells can be identified, though swelling of these cells often obscures structure.

In stable CBA, the histiocytes may comprise 10 to 50 per cent of all cell types while they may drop to 5 to 10 per cent during acute exacerbation. Usually yellowish-brown color is not seen, although crystallized yellowish particles are often seen in the recovery period of an acute CBA attack. Clear vacuoles are common in cytoplasm.

Blood transported PMN may comprise 2 to 30 per cent of the total cell types; PME, 22 to 90 per cent. (Charcot-Leyden crystals may be plentiful as well as free eosinophil granules.)

Requiring only a few minutes, microscopic examination of fresh wet sputum preparations should be a standard laboratory procedure in the initial and subsequent evaluation of patients with chronic obstructive pulmonary diseases.

Phytanic Acid in Patients With Refsum's Syndrome and Response to Dietary Treatment

D. Steinberg et al (Univ of California Dept of Medicine, San Diego)

Arch Intern Med 125:75-87 (Jan) 1970

Metabolic studies in two patients with Refsum's syndrome provide further evidence that the phytanic acid stored has a strictly exogenous origin. On a highly restricted diet the phytanic acid levels in blood and in adipose tissue fell dramatically over a period of months. This was accompanied by a number of manifestations of clinical improvement, including increase in ulnar nerve conduction velocity, increase in strength of several muscle groups, return of some previously unobtainable reflexes, improvement in pain, light-touch and position sense, and improvement in objective tests of coordination. There was no improvement in vision or hearing. The results support the hypothesis that accumulation of phytanic acid plays a pathogenetic role in Refsum's disease, and justify further therapeutic trials.

OPPORTUNITIES TO PRACTICE MEDICINE IN ARKANSAS

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DIAMOND CITY. Good location for semi-retired physician. Planned community on peninsula of Lake Bull Shoals. Growing retirement development.

FAYETTEVILLE. Office space available; new building across from city hospital. Adequate parking. Good opportunity for practice in ENT, Geriatrics or as general practitioner.

FORT SMITH. Associate wanted by two general practitioners. Population about 70,000. Busy office and hospital practice. $20,000-$25,000 salary first year with increasing percentage until full partnership.

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SILOAM SPRINGS. Population 5,500. Opportunity for association with general practitioner. Practice includes surgery, obstetrics, pediatrics, geriatrics, etc. New clinic building across street from hospital.

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CALICO ROCK. Population about 800. Opportunity for association with general practitioner—either GP or internist. Salary at first, with increasing percentage until full partnership.

COTTON PLANT. Population 1,800. Town without a physician. Doctor Committee and Jaycees heading a drive to obtain physician and build suitable clinic.

HUGHES. Population 2,000. Modern, completely equipped clinic available. One physician in practice in town; large trade area.

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For additional details on these and other locations, please contact:

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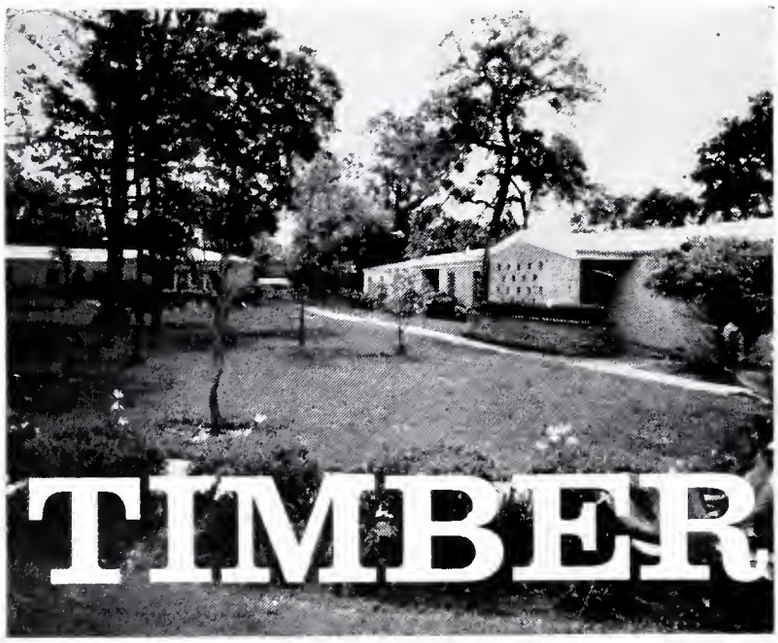

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The Major Cause of Death*

William G. Reese, M.D.**

The main goals of physicians are to prevent premature death and to improve the health of the living. I say *premature* death on the reasonable assumption that eventual death is inevitable, perhaps desirable. For the mature person, regardless of religious belief or non-belief, the certainty of eventual death may give more meaning to life. If we could eliminate death, ecological considerations would force us to eliminate birth, and this would certainly make life less meaningful. With diminishing quantities of uncontaminated food, water, air and space, perhaps a fair share of life is sufficient.

What is a fair share of life? When life is good, or can become so, that life should be preserved. Through contraception, countless potential lives must be prevented for the well-being and even survival of the living. Some foetal life should be terminated in the interest of the potential person and his associates. And while none of us support euthanasia, most of us abhor the artificial preservation of terminal life. If a person deserves a dignified life, he also deserves a dignified death.

The private practitioner attempts to improve the health of his individual patients. His public health colleague works toward the improvement of health for his community and for entire populations. People in general, and other professionals in particular, are equally concerned with the length and quality of life, but physicians have earned and have been given considerable responsibility toward this end. We should note in passing that physicians as a group are notoriously irresponsible about their own health, and are themselves a relatively high risk group for heart disease, suicide and drug addictions.[1]

This discussion will focus on causes of premature death. *The leading cause is anger.* After a brief look at mortality statistics, let me try to make a case for this bald and seemingly foolish statement.

Mortality Statistics for the United States

If current mortality statistics were to remain constant (God forbid), a new born infant in this country has over one chance in two of dying eventually from cardiovascular-renal disease (over half from heart disease), five chances in 100 from accidents (over half vehicular), and 16 in 100 from malignancy.[2] The 1969 death rate from heart disease, which now account for almost 40 per cent of all U. S. deaths, decline dslightly from the 1968 level; but motor vehicle fatalities increased about three per cent.[3] The one, two, three causes of death from ages 45 to 75 and over are heart disease, cancer and stroke.[4] Accidental deaths occupy the first position from ages one to 44 with vehicular accidents supreme from 15-24. In the latter age period homicide is the third leading cause.

In the third decade of life, an extremely important period from social and economic perspectives, we find that for 1955 the rank order of causes of death were: accidents, neoplasms, heart disease, homicide, and suicide—together accounting for 70 per cent of third decade deaths.[5] Undoubtedly some of the vehicular deaths represented homicide and/or suicide. Homicides were almost as frequent as cardiac deaths and a little more frequent than suicides, but deaths from suicide are underreported. The homocides do not include the institutionalized murders which our "enlightened" societies call war. Even so, the annual vehicular deaths in this country approximate the number of U. S. war dead since the beginning of the Vietnam tragedy.

Frazer[6] quotes Josephson as follows: "A study of adolescent emergency room visits in New York City has shown that half had been the victims of accident or violence. Nationwide, violent acci-

* Presented to the Texas Medical Association, May 1, 1970.
** 4301 West Markham, Little Rock, Arkansas 72205.
Reprinted from *Texas Medicine*, 66:56 (Sept.) 1970.

dents take a heavy and increasing toll among the young—more than any other cause of death. Among males in the 15 to 24-year age group, accidents, homicides and suicides may account for more than two-thirds of all deaths. The largest increases in suicide rates have been registered among the young." According to the same article, over the 1953-63 decade the suicide rate increased three times as rapidly for non-white males as for white males to approximately the same incidence for white and non-white. In considering death and disease, we must not forget that poverty and poor health are close companions. The ghetto poor (and no doubt the rural and reservation poor) at every age suffer from higher mortality rates, higher incidence of major diseases, shorter life-span and under-utilization of health facilities. There are also diseases of affluence. Ford[7] develops the thesis that social and technological changes produce new sources of death and disability—for example, pollution and new prescribed drugs.

The killers are also maimers. In 1967 over three million motor vehicle injuries needed medical care.[8] One study attributed 40 per cent of vehicular deaths to head injury.[7] The equal number surviving head injury were left with varying degrees of impairment, 13 per cent being totally disable for employment.

We have been glibly listing causes of death which could more accurately be called proximate or death-certificate causes. But did a particular man die because of collision, or because he was drunk, or because he went to the bar because he was mad at his wife, or because of an immature hostile-dependent personality, or because of a fatal combination of factors? What really killed Cock Robin? My central thesis is that the main cause of death is excessive and misdirected anger. The central position of anger is evident in murders of passion, murders of mob-violence and in infanticides of child abuse.

Suicide

It is not difficult to make a case for the anger of suicide. Of course there are suicides from the despair of real or imgained circumstances. There are the suicides of some of the accident-prone victims who lose in their particular games of Russian roulette. There are the slower, more covert suicides of those addicted to alcohol and other drugs or to food or to tobacco. Suicides are not limited to depression, but one study reports that 15 per cent of depressives die from suicide.[9] The unwitting accomplices in these are often the relatives, friends and even physicians who disregard the signals which may be loud and clear.

The paramount feature of the depressive suicide is anger—the anger of the person directed or misdirected against himself. Menninger[10] views suicide as the transformation of a wish to kill, to a wish to be killed, to a wish to die. With varying details of formulation, most analysts and psychiatrists agree to the central position of hostility in depressive suicide. The murder-suicides of pairs or families are spectacularly tragic, if not frequent, but even in solitary suicide, hostility toward survivor(s) may be a significant factor. One of my patients lost interest in suicide when he decided that his wife would welcome his demise.

Alcoholism

Alcoholism is highly associated with overt suicide and with accidental deaths. "Recent studies show that about half of all fatal highway crashes involve drivers who had been drinking,"[11] and another study indicates alcohol in 22% of all home accidents.[12] According to estimates accepted by the 28th International Congress on Alcohol and Alcoholism, there are more than five million alcoholics in the U. S. In 1963, 10,500 deaths in the U. S. were attributed to alcoholism. Insurance company figures put the life expectancy of alcoholics at ten to 12 years less than the non-alcoholic. Two million arrests were made in 1964 for drunkenness. The World Health Organization reports that the U. S. has moved ahead of France as the nation with the world's highest incidence of alcoholism."[13] The younger generation seems to favor other addictions which may or may not cause greater morbidity and mortality.

Addictive problems seem to have much in common with depressive disorders. "The final conclusion in the life of the drug (or alcohol) addict tends to suicide, marked deterioration, or a depressive-paranoid psychosis."[14] Much of the psychiatric literature emphasizes libidinal features and particularly oral fixation. I have been equally impressed by the hostile-dependence of such people and the considerable degree and extent of their destructiveness directed simultaneously at themselves and others. They are not just caricatures of hungry, craving infants, but of spiteful

children who would destroy their frustrators and themselves in the process.

Cardiovascular-Renal Diseases

In terms of mortality, the cardiovascular-renal diseases of particular concern are essential hypertension, coronary thrombosis and artherosclerosis. There is little doubt that emotional factors are important in the evaluation and treatment of these conditions. For example, the patient with acute myocardial infarction needs physical and emotional rest, and relief from the mutually abetting pain and anxiety. The victim needs drugs, oxygen and confidence in his doctor. The latter factor may tip the critical balance. Proper global treatment is equally important for the stroke victim and, in both types of vascular disease, comprehensive rehabilitation is essential. Emotional factors in the etiology of cariovascular disease and death are more complex, but no less important.[15] The observation that healthy young men may be cursed to death in primitive tribes seems fairly well authenticated. In exploring possible mechanism, Richter[16] demonstrated that wild rats may be frightened to death in the laboratory, apparently through the mechanism of vagal inhibition. Extensive research has extended and modified Cannon's pioneering observations on physiological concomitants of fight and fright, but review of this literature is beyond our scope.

Pavlov's American student, Gantt, has worked extensively on cardiovascular conditional reflexes. He and his students[17] (four of whom are in our laboratories) have conditioned heart rate, blood pressure, renal hypuria and coronary blood flow—all in dogs. According to Thomas,[18] Russian experimenters claim that chonic frustration of primitive urges may produce enduring hypertension in primates.

Certainly we must be wary of generalizing from lower animals to man, and we cannot attempt to produce disease in man. While engaged in some unpublished research in our laboratory with hypertensive patients, James Wilson noted considerably higher systolic blood pressure readings when his patients knew their blood pressure were recorded (cuff method) than when they did not know they were being recorded (digital monitor). In other laboratories, using operant conditioning techniques, human subjects have been conditioned to lower blood pressure and control ectopic beats.[19]

Levy and his group[20] showed that in man labile hypertension, commonly related to emotional stress, is often followed by sustained hypertension. Earlier, Pfeiffer and Wolff[21] demonstrated in about half of 35 subjects with hypertension but no evidence of renal disease that emotionally stressful topics raised systolic and diastolic blood pressure and produced renal vasoconstriction as measured by renal plasma flow.

One of my normotensive patients,[22] who was thoroughly trained in hypnosis, gave some interesting cardiovascular responses to suggestions of various moods. Figure 1 shows that the responses to suggestions of anger were even more pronounced that those to suggestions of anxiety. It should be noted, however, that this patient could not tolerate nor scarcely recognize her own anger and the hypnotic suggestion produced at least as much anxiety as anger. Probably humans rarely experience any pure emotion.[21] Nevertheless, Moses, *et al.*[23] reported that rage and resentment were the predominant affect of patients with pressure elevations above 160/100. In 1939 in the first volume of *Psychosomatic Medicine* Alexander and Saul[24] reported that hypertensive patients show strong aggressions and anxiety beneath their external friendliness. Unlike the bound hostility in every neurosis, Saul[25] found the hostility in hypertensives to be intense, chronic, inhibited, near to awareness and near to overt expression. This formulation again indicts hostility as a surreptitious killer in a pattern analogous to suicide since the unbound, generally controlled, reflected anger takes its toll of the cardiovascular system, albeit at the physiological level.

Malignant Neoplasm

The management of patients with malignancy is stressful to patient, family and physician and the physician's skill in sensitive interpersonal relations and his own emotional maturity and stability are of paramount importance. For a discussion of some of these issues I refer to you the recent book by Kubler-Ross, *On Death and Dying*.[27] Parenthetically, I find it strange that psychiatrists are so little involved with regional medical programs for heart, cancer and stroke.

Blumberg and colleagues[27] found marked differences in the personality characteristics of cancer patients who had rapidly advancing disease as compared with those who had far outlived expectancy. They concluded that intense emotional

stress may profoundly stimulate rate of neoplastic growth and postulated differences in host resistance. In an extensive review of this and 74 other papers, Perrin and Pierce[29] state that "the psychological reactions and defenses of persons to the development of cancer secondary to emotional trauma are reported to be similar to those found in neurotic patients. Particularly prominent are depression and guilt." In general, however, these authors seriously questioned adequacy of research design in most of the studies reviewed. As unlikely as it now seems, I am willing to grant the possibility that emotional factors may have something to do with the *etiology* of neoplasm. Certainly emotional factors are related to host resistance to infections and play some role in allergic mechanisms.

General Formulation

I believe that I have made a case for the significance of emotional factors in the etiology of premature death. I have singled out *anger* as a key factor in deaths associated with accidents, homicides, suicides, addictions and essential hypertension. This, of course, is oversimplification for the purpose of emphasis. Anger is a normal feeling which is quite appropriate in some situations so long as it is expressed appropriately and in moderation. Anger becomes abnormal and destructive when it leads to pathological behavior or to pathophysiology and pathology. Chronic defenses against anger produce an inhibited, joyless character structure in some and self-righteous bigotry in others. Handled neurotically, in those with hypertrophied superegos, anger may generate anxiety, obsessive-compulsiveness, or various types of clinical depressions. Handled impulsively, it may lead to rage and overt ego-alien destructiveness. Handled antisocially, in those bereft of conscience, it may lead to ego-syntonic violence. Handled dyssocially, by youth gangs or misguided mobs who use the wrong means for the right ends, it may lead to gross destruction of person, property and social institutions. Handled psychophysiologically, anger may lead to physiological maladaptation, functional impairment and somatic damage. The vicissitudes of anger depend upon multiple complex factors of heredity, experience and circumstance. The determining factors are biological, ecological, sociological, educational and psychological. Of course anger is only one of the drives involved in psychodynamics and psychopathology—but perhaps sex has had top billing long enough. Anyway, frustrated sex drives may lead to anger as well as anxiety.

Prevention

Obviously the physician is vitally concerned with the identification and elimination of causes of death. The surgeon must decide for himself whether to invest some of his time and skill in trauma prevention programs. How much effort should the pediatrician invest in poison-prevention programs? The general practitioner must decide whether and how to participate in drug education programs and in the informed treatment of alcoholics. All of us must learn to recognize and arrange for appropriate treatment of the suicidal risk. The psychiatrist must decide whether he should spend more of his time in crisis intervention and other preventive programs.

Perhaps most of us should invest more time and wisdom in improving health delivery systems.[30] If we were not so important to our fellow citizens, we would be less criticized. The Lord chastiseth whom He loveth—with great assistance from the masses. Although we could do with more love and less criticism, we cannot hide completely behind the rationalization. Perhaps we are most vulnerable when accused of insufficient attention to the health needs of those who are poor in funds and rich in pathology. It is the job of society, of which we are a part, to eliminate poverty and to improve our physical and social environment. It is our duty to work with the rest of society toward the reduction of premature death and the improvement of health of all. Having almost subdued the other species, including bacterial pathogens, man must now conquer himself. Unless he can better domesticate his own hostility, *homo sapiens* may join the list of extinct species with no one left to write the epitaph.

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Determination of the Viability of Ischemic Intestine

K. Carter, Jr., et al (3600 Prytania St, New Orleans)
Arch Surg 100:695-701 (June) 1970

MTT is a tetrazolium dye which changes from yellow to blue when reduced to dehydrogenase enzymes. With prolonged periods of ischemia, the time it takes tissue biopsies to change color in the MTT solution increases. Canine ileum was rendered without blood supply for periods of up to ten hours, and hourly MTT dye times were determined. Vital dyes were used to prove that the isolated intestine was avascular and to show that circulation had returned after the clamps were removed. Surprisingly many dogs survived such prolonged periods of ischemia. All animals except one with MTT times of less than 70 seconds survived and all with times longer died. After the bowel was revascularized the MTT times returned to within the normal range, but this post-devascularization time did not correlate with survival. The main difficulty with the test is the subjectiveness of the end point, requiring considerable experience before it can be read with confidence.

Portal and Peripheral Vein Immunoreactive Insulin Concentrations Before and After Glucose Infusion

W. G. Blackard and N. C. Nelson (Louisiana State Univ Medical Center, New Orleans)
Diabetes 19:302-306 (May) 1970

Catheterization of the portal vein via the umbilical vein was performed under local anesthesia in 12 nondiabetics prior to exploratory laporatomy. Immunoreactive insulin (IRI) in simultaneously obtained portal and peripheral vein plasma was determined before, during, and after a two-minute glucose infusion of 25 gm. Two phases of insulin secretion were apparent from portal vein IRI concentrations. A rapid secretory phase beginning one minute after start of the infusion and lasting three to four minutes was followed by a slower secretory phase beginning approximately ten minutes after start of the glucose infusion. The absolute amount of "big" insulin (proinsulin-like material) in the portal vein was similar during the first phase and the early part of the second phase of insulin secretion. A significant positive correlation between portal vein and peripheral vein IRI response to glucose was noted.

The Physician: Public Servant or Private Practitioner*

Donald C. Thompson, R.Ph., (M.D.), President, Arkansas SAMA 1969-70

Ladies and Gentlemen, and in just 35 days it will be fellow physicians, I thank you for the opportunity to come before you today, as I did last year, representing the Arkansas Chapter of the Student AMA. Last year I told you what SAMA was doing nationally. I understand from the many comments that filtered back to me following my talk, that you were concerned regarding what I had said SAMA was doing. Well, gentlemen, SAMA is still at it. And, today rather than go over what our local chapter is doing, I've placed my report on the table in the rear of the room. It's to be published in the *Journal of the Arkansas Medical Society* at a later date, so if you don't get a copy today, you can read it there. But, today, I want to briefly let you know why we are doing what we are doing, both locally and nationally—and, I speak for both as a member of the Executive Council of National SAMA and as the 1969/70 President of Arkansas SAMA.

I want you to know that, like most young Americans, we are seeking answers to monstrously large problems. We are not consciously endeavoring to blaspheme modern medicine, the AMA, the Arkansas Medical Society, or anyone else. We are simply trying to find answers to questions like:

"What is the physician's role in the decade ahead?"

"Why do so many people needlessly die in America?"

"Why do physicians not go into black neighborhoods?"

"Why aren't there enough doctors to supply the demand?"

"Why do the armed forces have enough doctors and a town of 900 in Utah must have a pharmacist to practice medicine?"

"What are the roles of the allied health professions in tomorrow's medicine?"

"Is the physician in the future to be a public servant or a private practitioner?"

"Is Uncle Sam (alias Big Brother) really lying when he denigrates and maligns the private sector of medicine?"

These questions and many more are ones I hear everyday from students in school at the University of Arkansas Medical Center. They're also heard from all over the country. We are convinced that as health professionals, neophyte physicians to be sure, our major goal is the same as yours: To provide the best possible health care to all the people in the most effective, efficient and inexpensive manner possible. And, students today who are striving to believe in the traditional principles and goals of medicine are becoming more and more confused and frustrated than ever before.

We're hearing from every side that the private practice of medicine based on fee for service is in serious jeopardy, that prepaid group practice is the only way to go, that the federal and state government will take a larger part in the practice of medicine. And, it would appear than the hand writing is on the wall.

Private medicine is cooperating with Medicare and Medicaid and all the other programs of our government in an effort to make them work. But, won't this lead to medicine eventually being controlled through its pocketbook even more than it is now? The students are seeing this and some are becoming convinced that absolute government control—total socialization of medicine, if you will—is the way its going. It this the right approach? Are we to believe our eyes? Is it just that the moderate voice is squelched by the efforts of the Washington planners? And, do the planners have the peoples' best interest at heart or are they trying to destroy our whole society and are just starting with the traditionally most powerful political group. Some of the biggest names in medicine today are on Walter Reuther's Committee of 100!

It would appear that the physician of the future will be more or less forced to assume the position that health is a basic human right. And, the young physician today has inculcated into him by the various medical journals that medical education should be changed from a disease oriented science to a health oriented humanistic endeavor.

He is told that "the physician, both singly and collectively, is going to have to provide solutions to what the public perceives as the problems in medical care: namely; costs, quality, and equality."*

* Annual SAMA address delivered to the House of Delegates of the Arkansas Medical Society, April 26, 1970.

* Knowles, John, "The Physician in the Decade Ahead," Hospitals (J.A.H.A.), Vol. 44, p. 57, 1970.

One would think, and it's commonly told, that the student is led away from private medicine in general and family medicine in particular by the faculties of the medical schools. However, in discussion with our preceptees who return to school, we find that there are also a large number of students who are "turned off" by private physicians stressing aspects of medicine other than the basic reasons that they're in practice, i.e., the opportunity to deliver health care and assume the responsibility for one's own actions.

But even with all this, there is an upsurge in the student movement in an effort for the student to get on the inside and learn about and influence what is happening, instead of letting it happen to him. Even conservative and moderate students like myself are beginning to "want a piece of the action." We are not the radical types that dwell in the realms of the Black United Youth, the Students for a Democratic Society, the Weathermen (the most militant faction of the SDS), the Black Panthers, or even the Student Health Organization. We are students who believe in the age old saying:

My Country, Right or Wrong
When Right, to be Kept Right, and
When Wrong to be made Right.

And, the belief is that there are many legitimate wrongs in our society today that need correcting.

The urge is to "rush out and correct them." However, we realize that we are not only neophytes in our profession, but that we are also neophytes in our society. We need help and guidance through the maze of word tangles eminating from all directions.

If we are understand the practice and economics of private medicine and of private hospitals, we need to see these things first-hand. We need private practitioners and private hospitals to make spaces available for students in all five years to learn what medicine is all about. We need to be included on the various committees of the Arkansas Medical Society and the Arkansas Academy of General Practice. And, the student needs to be invited to attend the County Medical Society meetings to see how these various groups operate. In short, the student must be included in the workings of the medical societies or he will become more and more divorced from private medicine.

I humbly bring these things before you today. I beseech you to act on them, even if it requires a change in your constitution. You must show the student that you want him so he will not be led away from you by those who would do so.

And, in closing, I would like to invite you to our SAMA Distinguished Lecturer Series at the Medical Center so that you may hear both Dr. Edward Kowalewski, President of the AAGP who will speak Thursday, April 30, 1970 at 4:00 p.m. in the Medical Center Auditorium, and Dr. Roger O. Egeberg, Assistant Secretary for Health and Scientific Affairs in the Department of Health, Education and Welfare who will speak at 2:30 p.m. on May 6, 1970 at the Medical Center Auditorium.

Too, I would ask that should you have any questions this year concerning my talk that before too much speculation is allowed that you pay me the courtesy of asking me back to clarify whatever points need elaboration. I assure you that I shall make every effort to return to Hot Springs to speak with you.

Pupil Size and Spontaneous Pupillary Waves Associated With Alertness, Drowsiness, and Sleep

R. E. Yoss, N. J. Moyer, and R. W. Hollenhorst (Mayo Clinic, Rochester, Minn)
Neurology 20:545-554 (June) 1970

The electronic infrared pupillograph was used to study spontaneous changes in pupillary size and behavior in sleepy people. By employing an eyelid crutch, observations could be made on the pupil even when the eyelids would ordinarily be closed because of sleepiness or sleep. In the spectrum ranging from alertness to sleep, there are characteristic pupillary changes in size and behavior which were divided into eight pupillographic stages. Spontaneous waves of constriction and dilatation of pupils occur at decreased levels of wakefulness and during sleep, and are controlled by the parasympathetic system. A classification of levels of wakefulness is presented based primarily on objective measurements of pupillary size and behavior, and correlated with the more subjective clinical states of alertness, drowsiness, and sleep.

Are We Prepared?

Ben N. Saltzman, M.D.*

About 47 years ago, as a child of 8, I was traveling in a car with my family along the Boston Post Road in New England. We suddenly came upon a cluster of cars and were confronted with a sight that I shall never forget. A car had telescoped into a telephone pole on the right hand side of the road. There were many people milling about, but I could see a man sitting on the running board of the damaged car holding his head in his hand with blood streaming between his fingers. A woman was lying at the side of the road. She appeared to be completely still and was covered with blood. I saw a man reach into the car and bring out a boy of about my own age. This youngster was also covered with blood. But the thing that affected me most, was the sight of both legs dangling with bone showing through his stockings and blood pouring out of the wounds. The man did not stop for anything. He put the lad into the front seat of his car and took off, apparently for a hospital. Even at that age I knew that something wasn't right. I was just a kid and this was as much as I could take. I don't have to tell you that I was pretty sick. The sight of that bone and blood almost kept me from becoming a physician. The memory has lasted me my entire lifetime.

But as you see, I did become a psysician. A few months ago, I was working at night in the emergency room of our local hospital, treating an external ear infection in a swimmer who had had the problem for about ten days, when a man came into the room carrying a child in his arms. I could see at a glance that both legs were fractured and dangling with bone showing and blood streaming out of the wounds.

Have we learned anything in 47 years?

For the past several years I have been a member and chairman of the Council on Rural Health of the American Medical Association. In this capacity, I have had the opportunity of participating in several national conferences. At one of these, I heard Dr. Julian A. Waller, tell the participants that a study of rural and urban traffic deaths in California, revealed that one and a half times more people were injured in traffic accidents in rural counties than in urban counties; and that people injured in rural counties were almost four times as likely to die of their injuries as those injured in urban counties. This despite the fact that the accidents were less severe and the injuries were more survivable. This pointed to the possibility that this high fatality rate was related to an inability to provide adequate first aid procedures, and to get the injured person to a hospital within a reasonable period of time. Our council felt that this problem was one of a rural as well as urban nature and proceeded to formulate a Rural Emergency Medical Services Plan that was approved by the American Medical Association Board of Trustees and the house of delegates. The plan urged that:

"1. Rural communities coordinate their efforts with adjacent towns in analyzing existing patterns of response to medical emergencies. This must be done by each community individually, since urban and rural areas will have different problems. Bottlenecks and poor communication patterns may occur in different places. Particular isolated stretches of roadway or waterfront may have so many accidents that it is worth installing telephones or first aid supplies, or providing first aid training for residents or workers in these areas.

2. Rural and urban communities institute a medical service area program for emergency medical transportation facilities and health personnel.

3. Rural and urban communities where possible, adopt the model ambulance ordinance to give the public a greater voice in the quality of ambulance care. (The ordinance proposes standards for ambulance equipment, personnel and operation, liability insurance requirements, maintenance of records, duties of regulatory agencies, and penalties to be imposed if the ordinance is disobeyed.)

4. Rural and urban communities provide a program of advance Red Cross first aid instruction for the non-medical people most frequently called in rural emergencies—especially police, sheriffs, and ambulance crews.

*126 West Sixth, Mountain Home, Arkansas 72653.

5. Rural and urban communities develop a continuing campaign directed toward first aid instruction for rural families and particularly young people through the schools, youth organizations, and other educational channels."

This plan was far reaching in its efforts. To begin the implementation in our own state, which is basically rural, the Rural Health Committee of the Arkansas Medical Society in cooperation with its Advisory Committee last year held a Rural Emergency Medical Services conference here in Little Rock. Many of the organizations represented here today participated. As the conference learned many more people and organizations needed to be involved.

Hence, this conference today. The problem is big. Dr. Norton and his steering committee realized this in setting up this meeting, but went ahead, hoping to bring the entire problem to the citizens of Arkansas, and trusting that each group would take home a segment of the problem as it effects themselves and work on it.

Today we will have an opportunity to listen to presentations and to discuss subjects dealing with problems connected with those attendant to the scene of a disaster; problems directed to physicians, nurses, and hospital administrators, and problems connected with those in government and as applicable to the general public. There will be three workshops. They concern themselves directly with the people who are to be involved. We will be divided into groups and we will ask ourselves "Are We Prepared?"

Last spring in a talk on "Systematic Approach to Emergency Medical Services" at a National Rural Heatlh Conference, Dr. Oscar P. Hampton, Jr., outlined the criteria of a complete system of Emergency Medical Services as embraced by the Standards of the National Highway Safety Bureau. These are:

"1. Clean casualty-carrying vehicles, motor car or helicopter of a design that provides adequate room for all necessary equipment and for an attendant to continue emergency care in transit. Such vehicles require a minimum head room of 54″ and preferably more, and a patient compartment of at least 116″ in length.
2. An attendant in addition to a competent driver, both certified by the American Red Cross as having completed both the Standard and Advanced First Aid Courses and, in addition, both having received the necessary training and to be proficient in measures such as protective rescue, control of hemorrhage, splinting of fractures, cardiopulmonary resuscitation, emergency childbirth, the care of the mentally disturbed, etc.
3. Adequate equipment on the vehicle for rescue and excellent emergency care. Adequate equipment includes each item on the Minimum Equipment List of the American College of Surgeons. This includes suction apparatus, bag mask resuscitators, and spine boards.
4. Central dispatching and control of all ambulances in the area with the dispatcher trained as thoroughly as the ambulance attendants.
5. Two-way radio communication between dispatcher, ambulance, and the emergency department, whereby the latter can be alerted to the impending arrival of the patient and a physician can offer advice to the attendant on the care of the patient in transit.
6. A fully equipped emergency department staffed by a competent physician with adequate allied professional help to render life-saving treatment to the critically injured and acutely ill.
7. A system of property exchange for splints, stretchers, and other equipment between the ambulance and the emergency department.
8. An adequate report system which provides helpful information to the physician from the attendants.
9. Close liaison between ambulance attendants and emergency department personnel so that the efforts of the former can be evaluated constructively as part of the continued training."

Dr. Hampton felt that these criteria could be met in every community quite simply if people are interested. Does it take money? Yes, a little. Does it take people? Yes, a great many. Following Dr. Hampton's criteria, let's go back and look at that accident that I saw. Let's make believe that it happened on one of our interstate highways in Arkansas. How could that accident have been handled? If any of the by-standers had had first aid training, an attempt could have been made to resuscitate the woman lying by the side of the road. If she had shown some sign of a heart beat, mouth to mouth breathing could have been

instituted. If a heart beat had not been present, someone might have attempted external cardiac massage. The man with the bloody head could have had compression bandages applied to cut down on blood loss and he could have been treated for obvious shock. A reclining position would have been helpful. The boy with the fractured legs could have been extricated from the car more carefully. Straightening and splinting of the legs with compression bandages to overcome bleeding would have reduced shock and further injury. Meanwhile, someone could have called an ambulance. It would have been helpful if there were roadside phones installed along the highway at specified intervals. A universal phone number would have been additionally helpful if emergency phones were not available.

Let's dream a little. A well equipped helicopter might have been brought to the scene for more rapid transportation to the emergency facility. However, a well equipped ambulance would have done almost as well, provided it had trained attendants. The attendants could have treated the people immediately for shock with plasma and fluids just like on the battlefield; and better splinting could have been instituted right there on the spot because of the equipment available. The ambulance itself, is not a decorated hearse that can carry only one person, but an upright utilitarian van that can carry four stretchers with enough head room so that the attendant can walk up-right. I saw several of these demonstrated in San Francisco at an Emergency Medical Services conference sponsored by the American Medical Association.

With the institution of proper first aid treatment the time element for transportation to the emergency room becomes not as critical. There is no need for sirens and high speeds which endanger the patients, the ambulance staff and other traffic along the roads.

The ambulance is equipped with a two-way radio, connecting directly with the hospital that can best cope with real emergencies. In that way the smaller hospitals can be by-passed and less shunting of the patient from one place to another occurs. Emergency staffs are thus alerted by professional aid men who can pretty clearly diagnose the problems and the needs. The emergency rooms in the hospitals are well equipped and not cluttered with non-emergency patients, who believe that because they can afford to pay more they will use the physician's time as it suits their own convenience. Thus, definitive care and immediate hospitalization becomes available and more lives are saved.

I have described, perhaps in overly simple terms, a form of preparedness. Auto accidents are not the only emergencies, although they do comprise the greatest number of accidental deaths. Natural disasters can affect us all. Some of us will have an opportunity to hear first hand about the Conway tornado a few years ago from Dr. Fred Gordy, Jr., and more recently the Jonesboro tornado from Dr. Grover Poole. These men have lived and worked through trying community catastrophes and they will have observations and recommendations to make.

Emergencies range from drownings to childbirth. How few of us are really prepared? Even we in the medical profession require constant updating, reminding, and practice. I recall that during World War II, I had charge of a civilian dispensary in the Panama Canal Zone. I was there from the beginning of the war and we had constant alarms, complete blackouts, air raid shelter construction, and civilian defense mobilization. We expected a repetition of Pearl Harbor and we were not prepared. It was my lot to teach first aid to civil defense groups. We went through the Red Cross handbook from beginning to end. Three months after what I thought was good instruction and learning; some accident victims were brought in by some of my best pupils. They had forgotten even the most basic rules in first aid treatment of casualties. Repetetive practice is most important. The single shot just does not work.

It is the hope of the Council on Rural Health that every family have at least one person well practiced in first aid. Age is not important. Several years ago, my daughter riding in a friend's car, noted that a car had gone off the road and two men had been thrown out into a ditch. One was moving about but the other was very still. She immediately felt the latter's pulse and found that it was strong, but he was not breathing. She cleaned his mouth and applied mouth to mouth resuscitation. After a short interval the man began to breathe normally. This man survived. She confided to me later, "Daddy, he didn't taste very good. He was drunk." I was very proud of my girl. I know that each of you would be proud of a child who had saved a life.

After we meet with our discussion groups in the various workshops, we will have an opportunity

to meet again to discuss our findings. Several experts in many fields will work with us as resource people. We will accept their opinions and fit them to our needs. Then, we will return to our jobs and do something in the fields in which we are best qualified.

Will Rogers once said, "We are the only nation in the world that waits until we get into a war before we start getting ready for it." The same thing seems to apply to our preparedness for emergency health services. This does not have to be this way. If some of you are mayors of your communities, go home and get things started. If some of you are councilmen stimulate the mayor. If some of you are workers in the health field, take the leadership and show the mayor how important preparation is to the community. If some of you are just people, then stimulate your health workers, your councilmen, your mayors and get something started. When our communities can achieve the criteria outlined in this talk in its entirety then, and then only, can we say "We Are Prepared."

Insulin Secretion in Heart Failure

B. Sharma et al (Dept of Medicine, General Infirmary, Leeds, England)

Brit Med J 2:396-398 (May 16) 1970

Insulin secretion tests were carried out before and after treatment in patients with severe congestive heart failure. Before treatment, the plasma insulin level and the insulin secretion response to intravenous tolbutamide were significantly reduced in all patients. In patients who made a good clinical recovery the plasma insulin level and the insulin secretion response were noticeably improved. Patients who had a poor response to medical treatment showed little improvement in their insulin secretion test. The mechanism of this suppression of insulin secretion is probably due to the reduced blood flow to the pancreas in combination with a high level of all circulating catecholamines.

Insulin Responses of Children With Chemical Diabetes Mellitus

A. L. Rosenbloom (Univ of Florida College of Medicine, Gainesville)

New Eng J Med 282:1228-1230 (May 28) 1970

Diminished insulin response to hyperglycemia is thought to be the genetically determined prerequisite for the development of diabetes mellitus, best demonstrated in the insulinopenic child with overt disease. In a study of eight children, aged 3½ to 16, with chemical diabetes mellitus, the authors describe normal (4), or increased (4) plasma immunoreactive insulin responses to oral glucose loading when analyzed as insulin/glucose ratios (insulin units/ml over glucose/ml). This apparent insulin hypoactivity is ameliorated by tolbutamide, which diminshes the insulinemia while either correcting or not significantly altering the glucose response. Thus, there appears to be a stage of essential diabetes mellitus in childhood characterized by reduced effectiveness of circulating immunoreactive insulin. Tolbutamide improves the glucose-insulin relationship and may prevent insulinopenic diabetes mellitus.

Survival in Patients With Lung Cancer

R. M. Senior (216 S Kingshighway, St Louis) and J. S. Adamson

Arch Intern Med 125:975-980 (June) 1970

Feinstein's system of classification of lung cancer patients was applied to 646 patients. Survival was highest in the patients who were asymptomatic at the time of diagnosis. Patients with protracted local symptoms before diagnosis had a higher survival rate than patients whose symptoms were systemic or pulmonary but of short duration. Patients with metastatic symptoms at the time of cancer detection had the lowest survival rate. These differences persisted even after the patients were divided into groups having similar extents of tumor spread. The present observations confirm the occurrence of patterns of survival which correspond to symptom stages and therefore support the concept advanced by Feinstein that symptoms in lung cancer have prognostic significance.

ELECTROCARDIOGRAM OF THE MONTH

AGE: 77 SEX: Male BUILD: Medium BLOOD PRESSURE: 160/100

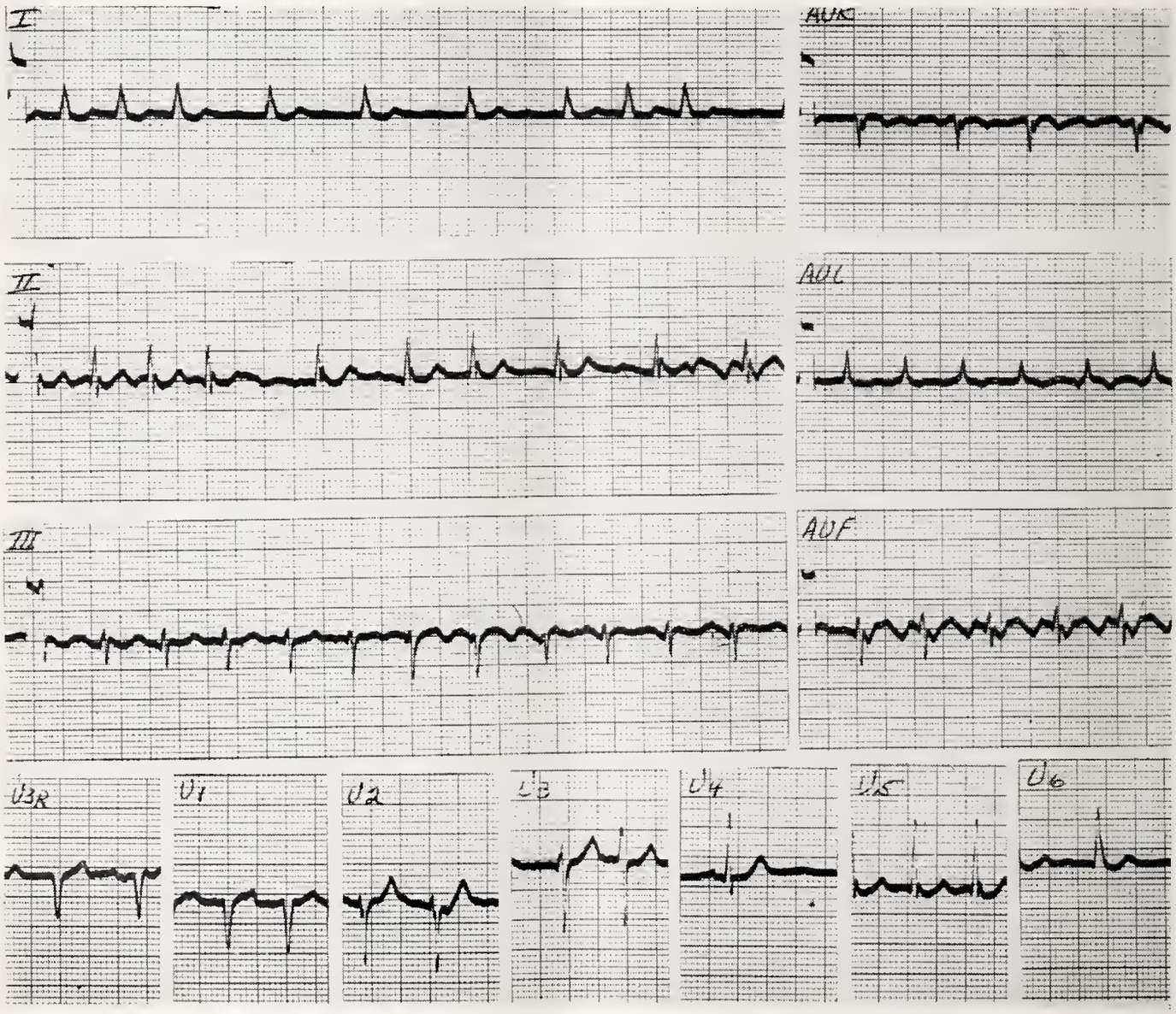
CARDIAC DIAGNOSIS: Arteriosclerotic heart disease; myocardial infarction.

OTHER DIAGNOSES: Parkinsonism.

MEDICATION: None.

HISTORY: Acute substernal pain 3 hours previously, not relieved by nitroglycerine.

See Answer on Page 180



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 180

James S. Garrison, Jr., M.D.

HISTORY: This 20-year-old colored male was involved in an auto accident. He presented with pain in the right wrist.

PUBLIC HEALTH AT A GLANCE

Immunization Report, 1963-1969

The Immunization Program was begun as a result of the Vaccination Assistance Act which was passed by Congress in October, 1962. The country for years had seen many of its children paralyzed and crippled from polio—then, the development of an oral poliomyelitis vaccine opened the way for the practical elimination of the disease. However, Census Bureau information showed that a large proportion of preschool children, especially those from lower socio-economic groups, were inadequately immunized against polio and other diseases such as diphtheria, pertussis, and tetanus.

When initial immunization funds were granted in 1962, they had a two-fold purpose—to catch up on the backlog of susceptibles, and to improve ongoing immunization programs which would prevent any future buildup of susceptibles. The funds were for the purchase of vaccine for preschoolers, and for the development of a more comprehensive and effective delivery of immunization services.

State after state examined its immunization status and realized that more children could be immunized and that more diseases could be prevented.

Late in 1963, ten Serfling sampling surveys were performed in Arkansas. These surveys were widely dispersed and covered all geographic areas in the state. They revealed an overall inadequate immunization level of protection among all age groups. The surveys also demonstrated the need for a state-wide program to motivate those hard-core group of "reluctants" to come forward for adequate immunizations.

Since that time, the Arkansas immunization program efforts have been directed toward four specific areas. These are:

(1) Infant Immunization Surveillance Systems.
(2) County-wide educational-motivational campaigns.
(3) Promotion and execution of county-wide mass measles campaigns.
(4) Promotion and execution of mass rubella immunization programs.

The Infant Immunization Surveillance System was implemented to identify newborn infants needing immunizations, and to contact their parents for referral to appropriate health care. An effective IBM card system was developed which enabled the Health Department to mail immunization inquiries to all parents, beginning when their infants reached three months of age. Responses from the mail-outs were tabulated for immunization data. Follow-up was initiated when the parents did not return the cards. Various changes in card design increased responses from a 9.8% initial rate to a monthly average response rate of 37.3% during calendar 1968.

The Arkansas Immunization Program also began a program designed to educate and motivate residents in disease prevention through immunization. Health department personnel conducted county-wide immunization campaigns in 62 of Arkansas' 75 counties. Each campaign had the endorsement of the local medical society and active participation by local officials, civic groups, and organizations.

Every available source was used to educate and motivate parents. (For example, during 1968, 263 newspaper articles appeared depicting the perils of measles, polio, diphtheria, tetanus, and pertussis were published in Arkansas newspapers; 94 radio and television stations throughout the state broadcast spot announcements urging parents to seek immunizations for their children; 80,000 persons were contacted through literature.)

Immunizations, as a result of the efforts of immunization personnel and local health workers, were increased by 35.3% in counties where campaigns were completed.

In January of 1967, the Arkansas Immunization Program began an intensive measles eradication effort. At that time, it was estimated Arkansas had 116,689 children of school age who were susceptible to measles.

A series of county-by-county mass measles immunization campaigns were begun with the approval of county medical societies and the support of numerous local groups and civic organizations. As of this date, the Immunization Program has administered measles vaccine to 105,293 children in 67 counties during such campaigns.

During calendar year 1967, 1,270 cases of rubeola were officially reported to the Arkansas Department of Health. Only two cases were reported in 1968.

From the state level, trained immunization personnel have been involved in organizing, publicizing, and executing the mass measles immunization campaigns in Arkansas. However, the general success of the measles eradication effort could not have been accomplished without the support of local medical societies, physicians, health departments, and organizations in each of the 67 target counties. (Most counties financially sponsored and contributed the necessary quantity of measles vaccine for their school-age susceptibles.)

During the course of Arkansas' mass measles immunization experience, many excellent working relationships were developed throughout the state with people interested in improving immunization levels and community health. Many of them contributed time, effort, and money.

We believe that most of these same working relationships can now be directed to the mass rubella immunization activities which we have recently begun.

In summary, the immunization program in Arkansas has been directed toward protecting children against polio, diphtheria, tetanus, pertussis, measles, and rubella. The program has been characterized by a high degree of cooperation and participation of local civic and volunteer organizations, medical societies, and individual physicians.

Although much progress has been made, much remains to be done in protecting the people against diseases which can be eradicated or, at least, reduced.

Idiopathic Orthostatic Hypotension

J. E. Thomas and A. Schirger (Mayo Clinic, Rochester, Minn)

Arch Neurol 22:289-293 (April) 1970

Fifty-seven patients with idiopathic orthostatic hypotension and somatic neurologic manifestations were studied, with emphasis on functional body systems involved, mode of evolution and pattern of neurologic deficit, and prognostic implications of the disease. The body systems affected were few in number but uniform among patients. Frequently disturbed were bladder and bowel regulations, postural blood pressure adjustment as well as sexual, sweating, and neurologic functions. The neurologic syndrome was distinctive, showing a striking propensity for bilateral and symmetrical involvement of central motor tracts (corticobulbar-corticospinal, extrapyramidal, cerebellar). The most conspicuous and also most disabling neurologic feature was the parkinsonian syndrome. Evolution of the disease was characteristically protracted and progression was orderly but often relentless.

Comparative Features and Course of Ulcerative and Granulomatous Colitis

D. J. Glotzer et al (330 Brookline Ave, Boston)

New Eng J Med 282:582-587 (March 12) 1970

The course of 95 patients was reviewed to evaluate criteria used to distinguish ulcerative and granulomatous colitis and to determine the effects of operation. Histological criteria useful in separation of the two forms of colitis were the depth of mucosal ulceration and inflammation and the presence of sinus tracts and granulomas. The presence of miscroscopic sinuses or granulomas correlated significantly with clinical features considered to be those of granulomatous colitis, and their absence with clinical features of ulcerative colitis ($P < 0.005$), but there was overlap in about one fourth of the cases. Patients with clinical and microscopic features of granulomatous colitis tended to require more ileostomy revisions, but the longterm course following total colectomy and ileostomy was similar for both forms of colitis. The unfavorable prognosis ascribed to the granulomatous form is not proved.

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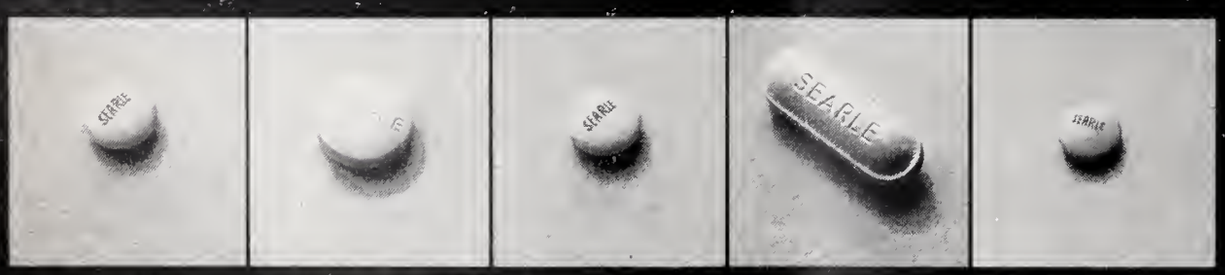

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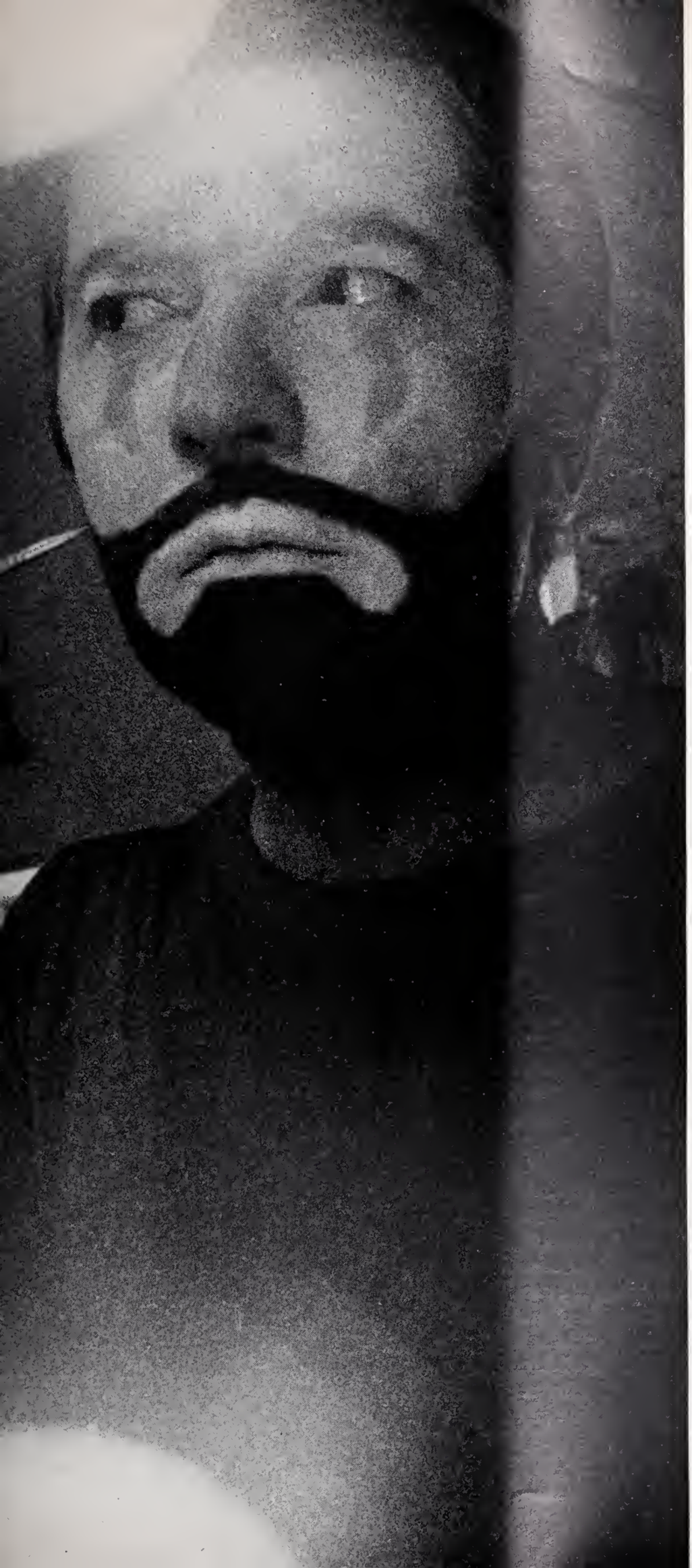

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Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

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Contraindications: Glaucoma, severe cardiac disease.

Warnings: Pro-Banthine with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.

Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.

Adult Dosage: One tablet three times a day.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
Phenobarbital 15 mg.
Warning: May be habit-forming.

For *Indications, Contraindications, Precautions, Side Effects* and *Dosage* see Pro-Banthine. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthine P.A.®
prolonged acting brand of propantheline bromide

For *Indications, Contraindications, Precautions* and *Side Effects* see Pro-Banthine.

Dosage Form: Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

Dosage: The recommended initial dosage is one tablet in the morning and one at night.

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EDITORIAL

Arkansas Unlimited

Alfred Kahn, Jr., M.D.

Arkansas is on the upswing and the doldrum years seem well behind us. The medical profession in Arkansas has unlimited opportunities for betterment of this state. We live and prosper in the tides that control our general prosperity. And yet our obligation as both physician and citizen remain despite economic fluctuations. Since a dynamic growing Arkansas offers more vistas of opportunity, it serves our public best to foster and back strongly any reasonable program of economic and social betterment.

This implies we should be physician-citizens, and not citizen-physicians. The health and happiness of most communities depend on good leadership and willing workers. The nature of medical practice may preclude the responsibilities of actual leadership in community projects, but it does not absolve the duty of strong participation at some level. The United Fund Drive is a good case in point; this merits the strongest possible support; these drives in most instances have realistic goals for the support of a host of worthwhile endeavors and their failure dictates higher taxation to accomplish the same means.

Some physicians are irresistably drawn toward the political arena, and why not. Medicine and politics are miscible, although perhaps not to the extent of Law or Business. Temporal considerations are a big factor. There have been a number of physicians in the Congress and a scattering among the state offices. And yet here again, much can be accomplished by being a strong follower. Good government at every level will lead to a better Arkansas. Currently, there are legal problems of medical interest in which physicians should take a stand. Air and water pollution are intimately related to health in Arkansas, and good legislature and enforcement will unquestionably prevent infections, intoxications, and perhaps malignancy.

Physicians are in a pivot position to interpret and direct broad social trends. In this regard, they have had a recent notable failure which should goad the profession to avoid a recurrence: Medicare. Here the social train of events was pretty obvious and a reasonable prognostication of future needs was possible. The social pattern of 1970 differs widely from that of the 1920s and 1930s. An increasing urban population has been associated with mechanization of farms to the extent that the city failure could not so to speak retreat to the farm for a refuge, for shelter and food. The public wanted and needed unemployment security for the jobless so that they would not be thrown into the streets. Physicians should have sensed a growing public demand for hospitalization of the older age groups, even if it was based on faulty premises. It was noted and it was countered by some but the course and treatment seemed to be widely misunderstood. The greatest increase in the cost of medical care was in the hospital services, and yet insurance companies sold cancellable health policies and it was difficult to get policies for the over 65 years old age group. If health insurance policies were offered by private industry at a reasonably low cost and with age and cancellation provisions, Medicare would not have seemed to be a necessity.

The physician's relationship to the community implies future as well as current planning. Emerging from a rather chaotic, unprogrammed growth in medical care facilities is the need for a comprehensive long range plan for health services in the community. Nowadays an unzoned city

is recognized as an unprogressive community and it is unlikely to prosper. Health planning has got to extend beyond just having enough hospital beds for the acutely ill. It should try and see that there is a balance of facilities for the acutely ill, the chronically ill, the elderly, etc. This, by no means, suggests that this should be done under government auspices or control—but rather through a voluntary association at the local level. Physicians should be leaders in this area.

The physician-citizen can do much to help Arkansas; and, to the extent he participates to, that extent he will also help himself and his profession.

"The Doctor as a Citizen"*

Stanley Applegate, M.D.**

Many doctors think that since they are the great physician, they are on a pedestal and their only purpose in life is to practice medicine (and, incidentally, make money).

A doctor has a responsibility to his community just the same as any citizen; and, because of the respect that most people have for doctors, he should be a leader.

The doctor should take an active part in his church, sing in the choir or teach a class, attend regularly and give his financial support.

He should try to be a good member of one of the civic clubs such as Kiwanis, Rotary, Lions, etc. He may not be able to devote too much time, but there are many things he can do to lend his knowledge and abilities. For instance, in my community, our Kiwanis Club has a Kid's Day football game each year to raise money for some of our projects such as building tennis courts, a track for one of the junior high schools, picnic shelters in the park, etc. The children must have a physical examination before the game, and I take one afternoon and examine about a hundred of these children before they play in the game.

Another activity that I feel is most important for a doctor to support and be active in is the Chamber of Commerce. The Chamber of Commerce is interested in all of the activities in a community so that by being active, one gets an insight into many civic problems. I have just been the president of the Springdale Chamber of Commerce and I was impressed by the attitude that most of the citizens had. They were more than willing to do what was asked of them and would remark, "If you will take your time to do these things, then I should help, too."

Many doctors have taken an active interest in school affairs and those who are sincere in their criticism have served on school boards and have contributed a great deal toward improving the level of education and facilities in their area.

Some of the finest legislators who have ever served in the State Legislature have been physicians. Politics have become so important to our everyday life and practice that it would behoove more of us to take more interest in this field. If we don't help make laws that will be beneficial to our patients, the taxpayers, and to us, if we do not help make laws that are good for medicine, the legislators whose only interest is in votes will make the laws for us. We will wind up with total socialized medicine just as sure as we are meeting here now. If you cannot take an active part in politics, at least you can support a candidate of your choice who is in sympathy and understands our problems.

And finally, of course, there is high school Careers Day, the Community Chest, and the Red Cross Blood Bank which can use the help of doctors. Each community has its own projects that it promotes in its own way. So be alert for the help that you alone can give to your particular place. Doctors are looked to for leadership—so be the example of the good citizen.

Don't be a drone—be a doer.

* Presented at the banquet for Senior Medical Students, Little Rock, May 5, 1970.

** President-elect, Arkansas Medical Society, 220 Meadow Avenue, Springdale 72764.

Report of AMA Meeting June, 1970 In Chicago, Illinois

Purcell Smith, Jr., M.D., Delegate

This report is a summary of the more significant actions of the House of Delegates at the June 1970 Convention, but is not intended as a complete report. The Chicago meeting was the first uninterrupted annual convention since 1967, thanks to the most elaborate security precautions ever taken. Wesley W. Hall from Nevada was elected President-elect; Dr. Hall will become the 126th President of the AMA in June 1971.

Dr. Walter C. Bornemeier, in his inaugural address as the AMA's 125th President, cited five areas for improvement in medical education and training: Shortening the medical school curriculum; modernizing and shortening residency programs; relating more medical training to patient care at an earlier point; assimilating full-time teachers into patient care; and reducing the number of medical research institutions and researchers.

The House of Delegates considered a record 201 items of business. Included were 61 reports and 140 resolutions, 27 of which were special ones generated by the Committe on Planning and Development (Himler). Some of the major items discussed are listed below.

1. Abortion

After long debate before the reference committee and on the floor of the House, delegates adopted the following statement on abortion:

"Resolved, That abortion is a medical procedure and should be performed only by a duly licensed physician and surgeon in an accredited hospital acting only in conformance with standards of good medical practice, and after consultation with two other physicians chosen because of their professional competence, and within the Medical Practice Act of his State; and be it further

"Resolved, That no physician or other professional personnel shall be compelled to perform any act which violates his good medical judgment. Neither physician, hospital, nor hospital personnel shall be required to perform any act violative of personally held moral principles. In these circumstances, good medical practice requires only that the physician or other professional personnel withdraw from the case so long as the withdrawal is consistent with good medical practice."

2. Consumer Forum

For the first time in its history, the House appointed a special reference committee to hold a public forum, at which individuals and representatives of groups could present their views of medical and health care. The committe heard three hours of testimony on the opening day of the convention. Consideration of having such an open forum at each AMA Convention was referred to the Board of Trustees.

3. Dues Increase

Until this convention, the amount of AMA dues was prescribed by the Board, for adoption or rejection by the House. However, the House amended the bylaws to give itself that responsibility. The Board of Trustees may submit recommendations to the House on the fiscal needs of the Association and the level of dues. Dues fixed by the House shall remain in effect until changed.

The House voted to increase AMA dues by $40.00, to $110.00. At the same time, the House directed that "basic and explicit information supporting the need for its dues increase, and further dues increases, be promptly disseminated by the AMA to individual members by every reasonable and available means possible; and that the aid to constituent state associations be enlisted in this effort."

The dues increase will become effective with the next fiscal year, beginning December 1, 1970.

4. Planning and Development

One of the longest debates of the meeting involved creating a body for long-range planning and development. When the matter was settled, a standing committe of the House (the Council on Long-Range Planning and Development) had been created and the bylaws had been changed appropriately to accommodate it. The council will have nine members, four appointed by the Speaker of the House, four appointed by the Board, and one appointed by the President of

SAMA. The council will submit reports to the House at each convention of the AMA.

The House also acted on the recommendations of the earlier Committee on Planning and Development (Himler committee). Here are those recommendations as adopted by the House, sometimes after extensive revision:

That, in the interest of attracting the most highly qualified candidates to the field of medicine, it simultaneously make every effort to maintain and create incentives in medical practice. Among these incentives are a multiplicity of practice options, maximum professional independence and freedom of choice for both physicians and patients.

That the AMA expand its active role in planning and developing programs for medical care in all of its ramifications and that it encourage and assist state and county medical societies to do the same at their respective levels.

That an appropriate Committee of the AMA immediately begin to formulate a policy on physicians' assistants, particularly with regard to their responsibilities, limitations on their services, and supervision of their services by qualified physicians.

That the AMA approve in principle certification of educational programs for physicians' assistants but oppose licensing of these individuals by any state agency.

In seeking as its goal the highest quality and availability of patient care, the American Medical Association advocates factual investigation and objective experimentation in new methods of delivery of health care, while still maintaining faith and trust in the private practice of medicine and pride in its accomplishments.

5. Education

In December, 1968, the House agreed that "an ultimate goal is unification of the internship and residency years into a coordinated whole." To move closer to that goal, in this meeting the House adopted the following statements:

"After July 1, 1971, a new internship program shall be approved only when the application contains convincing evidence that the internship and the related residency years will be organized and conducted as a unified and coordinated whole.

"After July 1, 1975, no internship program will be approved which is not integrated with residency training to form a unified program of graduate medical education."

6. Professional Liability

The House approved a Board report stating that liability insurance protection is essential so that physicians may continue to provide needed medical care to the public. "It has been concluded," the report said, "that the best way to provide such assurance is on a collective, rather than an individual basis, under programs jointly sponsored by the AMA and the respective state medical associations. Minimum standards for an effective sponsored insurance program are being developed" and the Professional Liability Committee of the Board "is seeking with the insurance industry a means for instituting qualified insurance programs under such joint sponsorship with state associations which elect to participate."

7. Nurses and Other Allies

The following AMA position statement on nursing was adopted:

"The AMA recognizes the need for, and will support efforts to increase, the number of nurses; recognizes the need for, and will facilitate the expansion of, the role of the nurse in providing patient care; encourages and supports all levels of nurse education; will promote and influence the development of a hospital nursing service, similar to a medical care service, under the leadership of a chief of professional service, aimed at increased involvement in direct medical care of the patient; supports the concept of the physician-led health team; and will seek constructive collaboration with the total nursing community."

8. Drugs

The House took a number of important actions in connection with drugs. Among them were the Arkansas resolution and the AMA voted to "support dispensing by pharmacists of all medications in child-protective containers, and encourage acceptance of the containers by parents." The House also felt that it is contrary to the public interest to repeal or modify "anti-substitution laws and regulations in order to permit the filling of prescriptions with therapeutic agents not intended by the prescribing physician." The House declared its intention "vigorously to support the maintenance and enforcement of anti-substitution laws and regulations."

Numerous other items were considered by the House, but these appeared to be the major ones.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

A Democratic and a Republican member of the House Ways and Means joined to introduce The American Medical Association's Medicredit plan for federally subsidized national insurance.

The co-sponsors of the legislation (H.R. 14567) were Reps. Richard Fulton (D., Tenn.) and Joel T. Broyhill (R., Va.). Both are members of the House Ways and Means Committee which has jurisdiction over such legislation. Soon after introduction of the Fulton-Broyhill measure, Rep. Omar Burleson (D., Tex.), also a member of the Ways and Means Committee, and Rep. John Jarman (D., Okla.), chairman of the House Commerce Subcommittee on Health, introduced an identical bill. Other members of the house from both major political parties indicated they also would become co-sponsors.

Fulton, who 18 months ago introduced legislation based on the Medicredit principles for financing private health insurance for individuals, told the House that the new bill "represents . . . a vast improvement over its predecessor by reason of the fact that it encompasses a built-in mechanism for cost control." He referred to mandatory peer review.

Speaking for himself and the measure's co-author, Rep. Joel T. Broyhill (R., Va.), Fulton said the time for national health insurance has come.

"And whether we're talking about the Rockefeller approach, the AFL-CIO approach, the Kennedy approach, or the approach taken by the Committee of 100, all of them advocate sweeping changes in our health care system," Fulton said.

"An across-the-board national health insurance plan, operated regardless of need, will carry a price tag of sobering size. And no such plan I have yet seen includes—at least to my satisfaction—a mechanism which promises effective cost control at the taxpayers' money.

"This brings us to an essential element of Medicredit—its provision of peer review. This bill calls for a constant and unremitting policing mechanism."

The other two parts of the Medicredit legislation would provide for the federal government financing or assisting in the financing of medical and hospital care for individuals and their dependents through participation in the cost of insurance policies of their choice—100 per cent premium payment for the low-income groups, and graduated participation in the payment of premiums for other persons, based on their federal income tax liability.

Congress is not expected to take up this year proposals for national health insurance. But reaction to the AMA peer review plan has been highly encouraging, and prospects appeared good that Congress would approve such a plan this year for medicare and medicaid. Sen. Wallace F. Bennett (R., Utah), a senate finance committee member, directed the committee's staff to work with AMA staff representatives in drafting such legislation as an amendment to a bill revising medicare and medicaid.

In a speech on the Senate floor, Bennett said there is deep concern over the high costs of medicare and medicaid. He complimented the AMA on advancing peer review as a means of curbing these costs. He said:

"I believe the American people are justifiably concerned over the tremendous costs of health care. Much of that concern, it seems to me, is a product of a very real feeling that we are not getting what we are paying for. I believe, equally, that much of the apprehension, anxiety, and suspicion now prevalent—for better or worse—with respect to those responsible for health care would disappear if professional standards review organizations were established and functioned effectively. It seems to me that the American people are entitled to know that American medicine shares their concern—and more importantly—proposes to do something substantial about it

through means of professional standards review organizations . . .

"I believe that physicians, properly organized and with a proper mandate, are capable of conducting an ongoing effective review program which would eliminate much of the present criticism of the profession and help enhance their stature as honorable men in an honorable vocation willing to undertake necessary and broad responsibility for overseeing professional functions. If medicine accepts this role and fulfills its responsibility, then the Government would not need to devote its energies and resources to this area of concern. Make no mistake; the direction of House-passed social security bill is toward more—not less—review of the need for and quality of health care. I believe my amendment would provide the necessary means by which organized medicine could assume responsibility for that review."

Bennett said that, under his amendment, review groups would have responsibility for reviewing "the totality of care provided patients—including all institutional care." That responsibility he said, would be lodged, "wherever possible and wherever feasible," at the local community level. He said:

"Local emphasis is necessary because the practice of medicine may vary, within reasonable limits, from area to area, and local review assures greater familiarity with the physicians involved and ready access to necessary data. Priority should be given to arrangements with local medical societies—of suitable size—which are willing and capable of undertaking comprehensive professional standards review . . .

"Under the amendment, the Secretary (of Health, Education and Welfare) could use state or local health departments or employ other suitable means of undertaking professional standards review only where the medical societies were unwilling or unable to do the necessary work, or where their efforts were only pro forma or token. Let me emphasize as strongly as possible that the thrust of this proposal is to have physicians, as a group, evaluate physicians and the services they provide and order as individuals."

Bennett said that the review committees should determine that only medically necessary services are provided by physicians, hospitals, nursing homes and pharmacies, and that these services meet proper professional standards.

Disciplinary measures, he said, would be in proportion to the offense and could include: 1) monetary penalties, 2) suspension from federal programs, 3) exclusion from federal programs, 4) civil or criminal prosecution, and 5) steps leading to the suspension or revocation of professional licensure.

Concerning the peer review part of his bill—H.R. 18567, "Health Insurance Assistance Act of 1970"—Fulton said:

"The appropriate medical societies would be charged with establishing a peer review mechanism that would, among other things, review individual charges and services, wherever performed; review hospital and skilled nursing home admissions; review the length of stays in hospitals and skilled nursing homes; and review the need for professional services provided in the institution.

"The process of ongoing review can have nothing but a salutary effect on the providers of services, thereby cutting down on the occasional or unintentional abuses that would otherwise occur.

"Patterns of abuse would be detected, and the abusers either suspended from or excluded from the program. Exclusion could follow action by the Secretary of Health, Education and Welfare upon the recommendation of the peer review committee.

"In the case of fraud, or other clear intentional misconduct, the peer review committee would be expected to bring charges before the appropriate licensing body.

"And in the event that a peer review committee was *not* established by the medical society within a reasonable time, or if established was not functioning, the Secretary of HEW, in consultation with the medical society, would be empowered to appoint a peer review committee that would function."

The Fulton-Broyhill bill would provide that an individual having a tax liability of $300 or less in a base year be entitled to a certificate acceptable by carriers for health care insurance for himself and his dependents. Insurance purchased with such a full-pay certificate would require no beneficiary participation in health care charges. Federal contribution to insurance purchased by individuals under this part of the program would be scaled in favor of low-income taxpayers—from 98% if the taxpayer's base year income tax is

between $301 and $325, to 10% when his tax liability exceeds $1,300. Basic benefits in a 12-month policy period would include 60 days of inpatient hospital care. To encourage utilization of less expensive facilities, two days in an extended care facility would count as one day of the 60 days allowed. Other basic benefits would include emergency and outpatient services, and all medical services provided by a doctor of medicine or osteopathy.

A supplemental coverage could provide, in addition, one or more of the following: prescription drugs not otherwise covered, additional days of inpatient and extended care services, blood in excess of three pints, personal health services when furnished on written direction of a physician, diagnostic and therapeutic services, and catastrophic coverage of all hospital and medical costs, up to $25,000, after the first $300 of incurred expenses borne by the beneficiary.

* * *

The Federal Communications Commission approved an application for local medical societies to operate special emergency radio services for their members.

The FCC said that such hookups could carry only messages relating to the safety of life or urgent medical duties of users. Such emergency radio service must be cooperative, with members assessed pro rata shares for cost of operation, the FCC said.

Previously, individual physicians have been allowed to use emergency radio frequencies and to form groups of physicians for such hookups, but societies representing all physicians in an area have been restricted by FCC regulations.

The FCC said in its ruling:

"There is merit in the plan to use these stations on a coordinated basis with telephone answering services now operated by medical societies and to dispatch messages from central points where society records are readily available to assist in locating a physician when called. . . . The proposal gives promise of fostering the opportunities for service in remote, rural regions . . . (and) would permit the establishment of parallel systems for emergency communications which would be in existence and available for use in times of national crises."

Medical societies that petitioned the FCC included Academy of Medicine of Cleveland and Cuyahoga County, Fayette County, Fresno County, King County, Los Angeles, Maricopa County, Montgomery County, Oklahoma County, San Joaquin, Milwaukee County, Sacramento County, and Travis County. They were joined by the American Medical Association.

THINGS TO COME

The faculties of the Baylor College of Medicine and the University of Texas present a Symposium on the "MANAGEMENT OF RENAL DISEASE," under the auspices of the Kidney Foundation of Houston and the Greater Gulf Coast, on November 12, 13, 14, 1970. This will be held at the Marriott Hotel in Houston, Texas. Topics to be covered will include: Urinary Tract Infection, Calculous Disease, Renal Hypertension, Renal Parenchymal Disease, and Dietetics in Renal Disease. Guest faculty will include: Drs. Earl H. Ginn, Jr., Erich Lang, Sidney Levin, Thomas A. Stamey, Marvin Tuck, and Edmund R. Yendt. This program has been approved for 14 prescribed hours by the American Academy of General Practice.

Additional information may be obtained from: C. E. Carlton, Jr., M.D., Baylor College of Medicine, 1200 Moursund Avenue, Houston, Texas 77025.

Arkansas Orthopaedic Society Fall Meeting

The annual fall meeting of the Arkansas Orthopaedic Society will be held in Pine Bluff on Saturday, October 17, 1970, according to Ashley S. Ross, M.D., Program Chairman.

A 12:30 p.m. luncheon at Jefferson Hospital will be followed by the scientific session, which will be, "The Shoulder, Reconstruction and Trauma." The bones of the shoulder girdle, proximal humerus and the shoulder joint will be included in the scientific session.

Banks Blackwell, M.D., President of the Arkansas Orthopaedic Society extends an invitation to all members to attend the meeting.

PERSONAL AND NEWS ITEMS

Errata

Through an error the following sponsors of the Second Annual Arkansas Conference on Emergency Health Services were not listed in the programs distributed for that meeting. They are: Arkansas Regional Medical Program, Arkansas State Dental Association, Arkansas Pharmaceutical Association and the Northwest Arkansas Firefighters' Association.

The participation of the above organizations played an essential and large part in the success of the Conference. Their support is most gratefully acknowledged by Dr. Robert M. Bransford, Conference Chairman, and by all who were involved with this year's meeting.

Dr. Ben Saltzman Rotary Chairman

Dr. Ben N. Saltzman of Mountain Home has been named chairman of the Youth Activities Committee of Rotary International.

He will serve with Rotarians from Denmark, Australia, Mexico, and Malaysia on the committee. Dr. Saltzman, a Rotarian since 1946, is a past president of the Rotary Club of Mountain Home and has served Rotary International as a director, district governor, and committee chairman.

Dr. Jansen Named Chairman

Dr. G. Thomas Jansen of Little Rock was elected chairman of the Central Arkansas Health Planning Council at an August meeting of its Board.

Dr. Saliba Opens Office in Osceola

Dr. Norman R. Saliba, formerly of Forrest City, is now located in Osceola for the practice of general surgery. His offices are to be located in a new clinic which is under construction.

Dr. Lane Is New AAGP President

Dr. W. H. Lane, Jr., of Russellville, was installed as the new president of the Arkansas Academy of General Practice at the Academy's 23rd Annual Assembly held in August in Little Rock. He succeeded outgoing president Dr. Guy U. Robinson of Dumas.

Installed with Dr. Lane were Dr. Kemal E. Kutait of Fort Smith, president-elect, and Dr. Paul Wallick of Monticello, vice president.

Dr. Lane practices at Dover and is the Pope County Health Officer.

Dr. Jackson Opens Office at Rison

Dr. William E. Jackson, formerly of Lewisville, is now located in Rison where his offices are in the east wing of the hospital there.

Mountain Home Clinic Announces New Staff Member

Drs. Maxwell G. Cheney, William R. Snow, Jack C. Wilson, and Robert L. Kerr of the Cheney-Snow-Wilson-Kerr Clinic in Mountain Home have announced the addition of Dr. Doyle Kinder to their staff.

El Dorado Appoints Panel to Study Doctor Shortage

Drs. Jacob P. Ellis, Berry Lee Moore, Jr., and Larkin M. Wilson were named by the president of the El Dorado Chamber of Commerce to serve on a select committee to study health care delivery in south Arkansas.

Special emphasis and study will be given the Physician-Assistants Projects according to an interview given by Dr. Ellis to members of the El Dorado news media.

Dr. James Kolb, Jr., Locates in Clarksville

Dr. James M. Kolb, Jr., has located his orthopedic surgery practice at 112 South Fulton Street in Clarksville. With his setting up practice in Clarksville, Dr. Kolb begins the second hundred years of medical practice by his family in that city.

Dr. Robert Bethell Moves to Wynne

Dr. Robert Bethell, who has been in practice at Des Arc, has moved to Wynne, associating with Dr. Willard Burk. Dr. Bethell's clinic buildings and equipment in Des Arc were purchased by Dr. G. M. Schumann and the Des Arc General Hospital.

Neurological Surgery Group Announces New Associate

Dr. Robert D. Dickens, Jr., has joined the neurological surgery practice of Drs. Robert Watson, John H. Adametz and Ray Jouett. Their offices are at 1026 Donaghey Building in Little Rock.

NEW MEMBERS

Dr. Donald Fred Thompson

Donald Fred Thompson, M.D., is a new member of the Crittenden County Medical Society.

Born in Little Rock, Dr. Thompson received his pre-medical education at the University of Arkansas and was graduated from its School of Medicine in 1964.

After completing his internship at Sacramento County Hospital in California, Dr. Thompson served two years in the United States Public Health Service. His residency in Dermatology was obtained from the University of Tennessee, John Gaston Hospital in Memphis.

A Candidate of the American Board of Dermatology, Dr. Thompson lists memberships in the Memphis Dermatological Society and the Society of Investigative Dermatology.

He now practices Dermatology at 200 South Rhodes, West Memphis.

* * *

Dr. Robert Samuel McGinnis, Sr.

Miller County Medical Society announces Robert Samuel McGinnis, Sr., from Vineyard, Arkansas, as a new member.

Dr. McGinnis obtained his B.S. from Arkansas State University in 1943 and his M.D. from the University of Arkansas School of Medicine in 1952.

He did his internship at Arkansas Baptist Medical Center before completing a Radiology residency at University of Tennessee School of Medicine, John Gaston Hospital in Memphis.

Board qualified, Dr. McGinnis is a member of the American College of Radiology and had practiced sixteen years in Hughes prior to moving to Texarkana earlier this year.

His practice of Radiology has its offices at 4800 Texas Boulevard, Texarkana, Texas.

* * *

Pulaski County Medical Society recently announced four new additions to its membership roll. They are Drs. Samuel William Boellner, Robert Dubose Dickins, Jr., John Malcolm Moore, Jr., and William H. Smoot.

Dr. Samuel William Boellner

Born in Arkadelphia, Dr. Samuel William Boellner attended Washington University, St. Louis, Missouri, for two years before finishing his undergraduate studies at the University of Arkansas, B.S. 1970.

Graduating from the University of Arkansas School of Medicine in 1961, Dr. Boellner interned at the University of Minnesota Hospital, Minneapolis, Minnesota. He served two years' duty in the United States Navy as a Lieutenant Commander.

Dr. Boellner has done the following residencies: Assistant Pediatric Resident, Vanderbilt University Hospital, Nashville, Tennessee, 1962-63; Pediatric Resident, University of Arkansas Medical Center, 1963-64; Neurology Resident, University of Arkansas Medical Center, 1964-65; Neurology Resident, Washington University Hospital, St. Louis, Missouri, 1967-68; and Neurology Resident, University of Arkansas Medical Center, 1968-69.

Since 1969, Dr. Boellner has been Assistant Professor, Division of Neurology and Department of Pediatrics at the University of Arkansas Medical Center.

He is a Diplomate, American Board of Pediatrics; Fellow, American Academy of Pediatrics; a member of the American Medical Association; and a Junior Member of the American Academy of Neurology.

Board certified in Pediatrics, his office is located in the University of Arkansas Medical Center where he works by appointment.

* * *

Dr. Robert Dubose Dickins, Jr.

Dr. Robert Dubose Dickins, Jr., was born in Little Rock.

His B.A. degree was conferred by Vanderbilt University, Nashville, Tennessee, in 1960, as was his M.D. from that institution's School of Medicine in 1964.

Dr. Dickins interned at Vanderbilt Hospital in Nashville during 1964-65. He was also a General Surgery Resident there in 1965-66 and, subsequently, a Neurosurgery Resident, 1966-70.

Now specializing in Neurological Surgery, Dr. Dickins has his office at 1026 Donaghey Building, Little Rock.

* * *

Dr. John Malcolm Moore, Jr.

Dr. John Malcolm Moore, Jr., was born in Arkadelphia.

He received his pre-medical education at the

University of Arkansas where he obtained his B.S. in 1959. In 1963, Dr. Moore was graduated from the University of Arkansas School of Medicine.

After his internship at Jackson Memorial Hospital in Miami, Florida, Dr. Moore served two years as a Captain in the United States Air Force.

Dr. Moore completed a residency in Urology at the University of Arkansas Medical Center during the years 1966-70.

Now specializing in Urology, Dr. Moore's offices are at Urology Associates, 500 South University, Little Rock.

* * *

Dr. William H. Smoot

Dr. William H. Smoot is a native of Keokuk, Iowa.

He holds the A.B. degree from the University of Missouri, Columbia, Missouri, Class of 1960. His M.D. degree was also gained there from that institution's School of Medicine, Class of 1964.

Dr. Smoot interned at St. Luke's Hospital, St. Louis, Missouri, and returned to the University of Missouri in Columbia to complete his residency in Dermatology. He was certified by the American Board of Dermatology in 1969.

A member of the American Academy of Dermatology, Dr. Smoot holds a teaching appointment from the Department of Dermatology, University of Arkansas School of Medicine, while his private practice of that specialty is located at 500 South University in Little Rock.

* * *

Sebastian County Medical Society has added Dr. Robert P. Hughes, Jr., to its membership.

Dr. Robert P. Hughes, Jr.

Born in Little Rock, Dr. Hughes received his B.A. from the University of Virginia in 1957. He attended Johns Hopkins University School of Medicine where he graduated in 1961.

Both his internship and his residency in Ophthalmology were done at Walter Reed General Hospital, Washington, D. C. During 1968-69, Dr. Hughes was Assistant Chief, Ophthalmology Service, Walter Reed General Hospital.

Dr. Hughes was on active duty with the United States Armed Services from 1960 until he resigned in 1968. He was certified by the American Board of Opthalmology in 1967 and is a member of the American Academy of Ophthalmology and Otolaryngology and the Society of Military Opthalmologists.

Specializing in Ophthalmology, his office is at 1214 North B Street, Fort Smith.

Dr. Grady Richard Collum

Dr. Grady Richard Collum is a new member of the St. Francis County Medical Society.

He was born in Heth, Arkansas, and received his pre-medical education at Arkansas Polytechnic College in Russellville.

Dr. Collum graduated from the University of Arkansas School of Medicine in 1966. His internship was done at the Arkansas Baptist Medical Center in Little Rock.

Dr. Collum served in the United States Navy from 1967 until August, 1969, and was stationed in Da Nang, Republic of South Vietnam.

He now is in General Practice at 55 Third Street in Hughes.

RESOLUTIONS

Dr. John Marshall Robinson

WHEREAS, the members of the Pulaski County Medical Society note with sincere regret the close of the long and productive life of their colleague, John Marshall Robinson, M.D.; and

WHEREAS, Dr. Robinson's contribution to mankind was exemplified in his untiring devotion to the care of his patients for nearly seventy years; and

WHEREAS, his pioneer efforts and leadership in service to the people of this community and state resulted in benefits that will be enjoyed for many years to come;

BE IT THEREFORE RESOLVED: That this Society pause with respect in recognizing the loss of Dr. Robinson as a valued member; and

That we express our sincere sympathy to Mrs. Robinson and other members of the family; and

That a copy of this resolution be made a part of the permanent records of this organization; and

That a copy of this resolution be forwarded to the Journal of the Arkansas Medical Society for publication.

By Direction of Memorials Committee
T. Duel Brown, M.D., Chairman
Robert Watson, M.D.
Henry Hollenberg, M.D.

Approved by Executive Committee
August 19, 1970

The Woman's Auxiliary to the Jefferson County Medical Society donated the proceeds of a rummage sale held in August to Jefferson Hospital. Representing the Auxiliary were Mrs. Claude Fendley and Mrs. Carl Nash when a check for $350.00 was given to hospital officials.

The money will be used in payment for a Multi-Media Instructional System to be used in training nurses working in intensive coronary care.

ARKANSAS CADUCEUS CLUB TO OBSERVE HOMECOMING

The Arkansas Caduceus Club will sponsor its second annual Homecoming observance for the School of Medicine on October 24 (begins 1:00 P.M.) at the new Worthen Bank Building, according to an announcement by Francis M. Henderson, M.D. '60, Pine Bluff, Club president.

New officers and four new trustees will be elected, and President-elect John V. Satterfield, Jr., M.D. '58, Little Rock, will be installed.

The Scientific Session at two o'clock will open with a talk by Dr. Henderson on "The Crisis in Quality Education." Presenting papers will be Rear Admiral Oscar Gray, M.D. '44, Chief of the Navy Aerospace Medical Center, Pensacola, Florida, and William J. Flanigan, M.D. '55, Associate Professor of Medicine and Head, Clinical Studies, UAMC, who will discuss the proposed statewide renal dialysis—transplantation program.

A dutch treat social hour will begin at 3:30 and a buffet supper served from 4:30 until 6:00 p.m.

Transportation on buses to and from the game are included in the seven dollar supper tickets. Tickets may be obtained from the office of The Arkansas Caduceus Club, Box 114, and must be purchased in advance.

ANSWER—Electrocardiogram of the Month

RATE: App. 120 RHYTHM: Caarse fibrillatian (flutter-fibrillatian)

PR: ___ sec. QRS: .07 sec. QT: .30, variable sec.

SIGNIFICANT ABNORMALITIES:

P waves replaced by F waves, at times regular in accurrence and farm, at times irregular.

INTERPRETATION: Abnarmal

Atrial fibrillatian (caarse type, flutter-fibrillatian), rapid ventricular respanse.

Dr. Goree Biscoe Westbrook

Dr. Goree Biscoe Westbrook died August 3, 1970, at the age of fifty.

Dr. Biscoe, as she was known professionally, was born in Pine Bluff. Her M.D. degree was obtained at the University of Arkansas School of Medicine in 1944 before she interned in Philadelphia, Pennsylvania. From 1945 until her death, she was engaged in general practice in Dumas.

Dr. Goree Biscoe Westbrook was a member of the Desha County and Arkansas Medical Societies and the American Medical Association.

She is survived by her husband, Mr. Mickey Westbrook, and two sons.

ANSWER—Radiology Case of the Month

DIAGNOSIS:

Perilunate dislocatian.

DISCUSSION:

All the carpals are dislacated darsally except the lunate, which remains in narmal positian. This is best seen an the lateral view. In this patient, there is alsa an avulsian fracture af stylaid and a break in the cartex af the navicular.

Perilunate injury is caused by a farce applied ta the palm af the hyperextended hand. Since the ligaments and, therefare, the blaod vessels are uninjured with dislacatian anly, avascular necrasis seldom accurs.

Perilunar dislacatian assaciated with a fracture af the carpal navicular canstitutes the mast camman fracture-dislacatian af the wrist and may be camplicated by avascular necrasis and nan-unian af the navicular.

REFERENCES:

1) Levetin, Jaseph, and Callaff, Ben: Raentgen Interpretatian af Fractures and Dislacatians. Charles C Thamas, 1956.

2) Zatkin, H. R.: The Raentgen Diagnasis af Trauma. Year Baak Medical Publishers, 1965.

COUNCIL MINUTES
August 16, 1970

The Council of the Arkansas Medical Society met at 12:00 noon on Sunday, August 16th, in the Sam Peck Hotel, Little Rock. Present were: Long, Kennedy, Hawkins, Shuffield, Saltzman, Paul Gray, Dwight Gray, Irwin, Duzan, Wynne, Kemp, Harris, Bethel, McCrary, Kolb, Orr, Kirby, Henry, Wilkins, Whittaker, Fowler, A. C. Bradford, Robert M. Bransford, J. A. Harrel, Carl Williams, Harry Hayes, Purcell Smith, George Mitchell, Edgar Easley, Winston Shorey, W. A. Hudson, C. W. Silverblatt, Mahlon Maris, Mr. Warren, Mr. Schaefer, Mr. Berry and Mr. Harris.

Chairman Long introduced C. W. Silverblatt, the new coordinator of the Arkansas Regional Medical Program. He also introduced Wright Hawkins as first vice president, C. Lynn Harris as sixth district councilor, and Morriss Henry as ninth district councilor. Other guests of the Council were introduced.

The Council transacted business as follows:

I. Chairman Long called the attention of the Council to the fact that Ark-Pac membership had increased from a low of 56 in 1967 and 58 in 1969 to 149 so far in 1970. Dr. Long announced that this was an all-time high record for Ark-Pac membership. The Council gave William S. Orr, Jr., Ark-Pac Chairman, a round of applause for his good work.

II. Upon the motion of Orr and Saltzman, the Council voted to disband the Committee on Correlation of Government Plans.

III. Upon the nomination by Saltzman and second by Henry, Rhys Williams of Harrison was elected third vice president, replacing D. L. Owens who resigned.

IV. The Council considered the report of the Mental Health Committee recommending that insurance policies extend the age for dependents and include broader coverage for alcoholism, drug addiction and mental illness. Upon the recommendation of the Insurance Committee and upon the motion of Kemp and Saltzman, the Council voted against taking action on the Mental Health report.

V. After hearing the chairman of the Insurance Committee, the Council voted to approve the group retirement plan proposed by PRO Services, upon motion by Wynne and Bethel.

VI. After lengthy discussion, the Council:

A. Voted to form a committee of all subspecialties whose members would be on call for service on the Fee Committee, upon motion of Saltzman and Kemp. The representative of the appropriate specialty is to be invited to meet with the Fee Committee when a case in the specialty is to be considered.

B. Upon the motion of Paul Gray and Henry, voted to establish three-year terms for service on the Fee Committee, with terms to end on April 30th. It was agreed that service on the committee would be counted beginning as of the anniversary date in 1970 and that prior service would not apply against the three-year maximum term.

C. Upon the motion of Kolb and Bethel, voted to select the committee in the order of the appearance of vacancies on the list supplied to the councilors.

D. In order to make available one more vacancy on the committee, Dr. Long resigned as chairman of the committee. Upon the nomination of McCrary and Wynne, elected Charles Wilkins, Jr., as chairman of the new Fee Committee.

E. Upon the motion of Kolb and Wynne, directed that the Fee Committee itself decide on the allotment of terms of tenure among the members of the new committee, such terms to be divided equally between one-year, two-year and three-year periods.

F. The committee members selected were:

Chairman: Charles F. Wilkins, Jr., Russellville.

General Practice: C. Lewis Hyatt, Monticello; Ross Fowler, Harrison.

Internal Medicine: Art B. Martin, Fort Smith. (The Internal Medicine section is to be requested to furnish three additional nominees for one other Internal Medicine representative on the committee.)

Surgery: Wright Hawkins, Fort Smith; Gilbert O. Dean, Little Rock; Rhys Williams, Harrison.

Allergy: Purcell Smith, Little Rock.

Anesthesiology: John L. Weare, Little Rock.

Dermatology: A. C. Bradford, Fort Smith.

Ophthalmology: James L. Smith, Little Rock.

Otolaryngology: E. L. Milner, Little Rock.

Obstetrics-Gynecology: Robert F. McCrary, Hot Springs.

Neurology: Robert Watson, Little Rock.

Psychiatry: Frank M. Westerfield, Jr., Little Rock.

Pediatrics: (nominations not received from Pediatrics).

Radiology: W. J. Rhinehart, Little Rock.

Pathology: Kenneth R. Duzan, El Dorado.

Orthopedics: H. Austin Grimes, Little Rock.

Urology: Carl Wilson, Fort Smith.

NOTE: By direction of the House of Delegates, the members of the Executive Committee are

automatically members of the Fee Committee. They are:

President: Jack W. Kennedy, Little Rock.

Chairman of the Council: C. C. Long, Ozark.

President-elect: Stanley Applegate, Springdale.

Secretary: Elvin Shuffield, Little Rock.

VII. Mr. Warren discussed the Union County Medical Society resolution requiring that the Arkansas Medical Society and the American Medical Association develop a new code of ethics which will not conflict with the requirements of new Federal health legislation. He advised the Council that he will attend a medical-legal meeting in October and will investigate to see if a way can be found to draw up a code which will not collide with the law. Mr. Warren will report to the Council at a later meeting.

VIII. The Council nominated M. J. Kilbury, Jr., of Little Rock and William R. Scurlock of El Dorado for a position on the State Cancer Commission.

IX. Ben N. Saltzman's name was selected for presentation to the American Medical Association as a nominee for a place on the AMA Committee on Planning and Development.

X. Mr. Schaefer discussed the growing problem of participation in Medical Society functions by non-member physicians. Upon the motion of Wynne and Dwight Gray, the Council directed Mr. Schaefer to enforce the Constitution and allow only members and guests as set out in the Constitution to participate in Society affairs.

XI. Mr. Schaefer reviewed various functions of the Medical Society which had grown or increased in costs markedly in the past five years. He asked the Council to consider each one separately as to whether (1) the function was still serving the purpose for which it was originally planned, and (2) whether the function was worth the increased cost. The Council voted to continue the following functions mentioned by Mr. Schaefer:

A. Free coffee bar at Annual Session.

B. Senior medical student banquets.

C. Annual winter meetings.

D. The Emergency Health Conference.

E. Chamber of Commerce dues (both national, state and local).

With regard to the Student American Medical Association contribution, the Council voted to consider each year's request individually and not establish any amount to be contributed to SAMA.

Regarding the expenses of mailing the Journal to all interns and residents, the Council directed that the Society send an inquiry annually to each intern and resident receiving the Journal to ascertain his interest in continuing to receive it. The headquarters office is to discontinue the subscription if an affirmative reply is not received.

XII. Upon the motion of Saltzman and Orr, the Council voted to make up any deficit in the budget of the Emergency Health Conference from the Rural Health Committee budget.

XIII. The Council received notice of the increase in premium for the Arkansas Medical Society Physicians Group with Blue Cross-Blue Shield and approved the addition of the optional benefits covering major medical care costs and intensive care unit costs.

XIV. Upon the motion of Bethel and Irwin, the Council voted to approve the Traffic Safety Committee report and refer it to the Committee on Legislation for implementation. It was directed that this subject be included in the agenda for the winter meeting of the Society.

XV. A. C. Bradford gave a report of the progress of the Drug Abuse Education Program of the Arkansas Medical Society. Upon the motion of Orr and Irwin, the report was approved by the Council.

XVI. Purcell Smith reported on the American Medical Association meeting in Chicago in June.

XVII. Dr. Kennedy reported on the present status of the Immunizations Sub-Committee, with particular reference to the state-wide rubella vaccine program. It was reported that sixty counties had already requested a rubella program. No action was considered necessary by the committee at this time.

XVIII. Robert M. Bransford reported on the planned Emergency Health Conference and urged the participation and interest of the members of the Council.

XIX. Upon the motion of Wynne and Bethel, it was decided to reaffirm Medical Society support of the licensing of ambulance drivers.

XX. J. A. Harrel reported on methods of tuberculosis control in Arkansas and requested the approval of the Council for placing the program under the control of the State Health Department. Upon the motion of Orr and Saltzman, the Council approved the request and directed that the item be put on the agenda for the House of Delegates meeting at the Winter Meeting.

The Council adjourned at 3:30 P.M.

APPROVED: C. C. Long, M.D.

TUBERCULOSIS ABSTRACTS

Sponsored by Arkansas Tuberculosis and Respiratory Disease Association

GENETIC AND ENVIRONMENTAL DETERMINANTS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE

Prevalence of abnormalities of pulmonary function among 156 relatives of 61 patients with chronic obstructive lung disease was found to be significantly higher than among 86 controls. Pulmonary impairment was more severe among smokers.

Recent reports have emphasized the association between a marked deficiency of a serum glycoprotein, alpha$_1$-antitrypsin, and chronic obstructive pulmonary disease. Since this protein deficiency is genetically determined, the question arises whether it accounts for all familial emphysema.

The present study was undertaken to investigate the prevalence of obstructive pulmonary disease and its relationship to alpha$_1$-antitrypsin deficiency among relatives of patients with chronic obstructive pulmonary disease. In addition, a group of spouses of these relatives was studied to provide a control group.

In all, 203 persons were studied, including 61 patients—designated in this study as index cases—156 first-degree relatives (siblings, parent, son, daughter), and 86 spouses of these relatives. All were 21 years old or older and lived within a 100-mile radius of each other.

PREVALENCE OF DISEASE

Approximately 23% of the relatives were found to have obstructive pulmonary disease as compared with 9% of the controls.

Severe abnormalities were seven times more prevalent in the relatives than in the controls (8% to 1%). However, since the numbers were small, the level of statistical significance was just 5% (chi square).

Of the 61 family fragments in this study, 22 families had at least one person other than the index case who was found to have chronic pulmonary disease. Twelve families had one other afflicted relative; eight families had two; one family had three, and another family had five.

There were a total of 58 afflicted family members, including the 22 index cases.

ANTITRYPSIN LEVELS

Alpha$_1$-antitrypsin levels were measured in 41 of these afflicted subjects according to the method described by Briscoe and associates. The only deviation from this method was that the optical density was read at 410 after the reaction was stopped within 0.1 N hydrochloric acid.

Serum level of alpha$_1$-antitrypsin activity has been used to identify persons with severe deficiency of the glycoprotein (homozygotes) that results from two defective genes, or persons with a lesser, or intermediate deficiency (heterozygotes) that results from a single defective gene.

In the homozygous genotype, the antitryptic level is very low (0 to 400 μ /100 ml serum). In heterozygous genotypes it is usually between 401 to 900 μ /100 ml.

In all 41 of those tested, alpha$_1$-antitrypsin levels exceeded the maximum homozygous level. In only two subjects did it fall within the heterozygous range.

Furthermore, only 10% of 91 relatives tested fell within the heterozygous range while 16% of 70 controls did.

Even more surprising perhaps, only 7% of 96 patients with mild to severe chronic obstructive pulmonary disease tested (9% of 67 with severe disease) fell within the heterozygous range while 15% of 118 normal subjects did.

ROLE OF HEREDITY

The possibility that emphysema may be the result of hereditary factors was suggested as long ago as 1845. The present study gives further support to this concept.

In this study, however, abnormal relatives were found in only 22 of the 61 family fragments. Moreover, two-thirds of the abnormals were found in just 10 family fragments. From this data

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Roger K. Larson, M.D.; Martin L. Barman, M.D.; Friedrich Kueppers, M.D., and H. Hugh Fudenberg, M.D., *Annals of Internal Medicine*, May, 1970 (Vol. 72, No. 5).

it is not possible to conclude that all chronic obstructive pulmonary disease is genetically determined.

At first glance the study would appear to suggest that heredity plays a more prominent role in women. A much higher percentage of abnormalities was found among smoking female relatives (29%) than the controls (0%). Such a disparity was not detected between smoking male relatives and controls. The percentage of smoking male relatives with abnormal pulmonary findings (25%) was close to the percentage for the smoking male controls (22%).

However, on closer scrutiny, 18% of male smoker relatives were classified as severe as compared with 3% for the comparable controls (significant at the 5% level). Thus, the relatively equal prevalence is somewhat specious and tends to mask the marked qualitative difference in severity.

The single-gene abnormality of alpha$_1$-antitrypsin deficiency has been reported to be associated with a very high prevalence of chronic obstructive pulmonary disease. This curious association was discovered by serendipity and has not been adequately explained as yet, although some hypotheses have been proposed in the literature. The present study suggests that familial chronic pulmonary disease may occur with or without alpha$_1$-antitrypsin deficiency and that the latter is less common.

In view of recent studies, however, showing an elevation of alpha$_1$-antitrypsin levels in heterozygotes into the normal range in the presence of infection, it is possible that some heterozygotes could have been missed in the present study. Additional studies will be necessary to clarify this point.

Although an attempt was made to subclassify the index cases and abnormal relatives as to type of disease, it became readily apparent that the vast majority fell into the broad category of the bronchitis-emphysema syndrome. Onset of disease with accompanying dyspnea occurred early in life for many. Furthermore, family histories of the afflicted patients revealed that females were affected as commonly as males.

ROLE OF SMOKING

Although an analysis of the effects of smoking on pulmonary function was not the primary purpose of this study, it was apparent that smoking was significantly associated with functional abnormalities. The prevalence of abnormality was lowest (3%) in nonsmoking controls. The prevalence was highest in the 107 relatives who smoked (27%). Similar patterns, falling between the two extremes, were detected in nonsmoking relatives and smoking controls.

Thus it appeared that heredity and the environmental factor of smoking may be codeterminants, with each contributing equally to the likelihood of the development of chronic obstructive pulmonary disease.

Distribution of Pulmonary Blood Flow After Myocardial Ischemia and Infarction

H. Kazemi et al (Massachusetts General Hosp, Boston)

Circulation 41:1025-1030 (June) 1970

Regional distribution of pulmonary blood flow and ventilation was determined with the xenon 133 technique in the erect position at bedside in 15 patients an average of six days after uncomplicated myocardial infarction (MI) and in 5 patients with severe angina in the same coronary care unit. Follow-up studies were repeated within 3 to 25 weeks on six of the patients with MI. There was marked reduction in perfusion to the lung base after MI. Patients with severe angina showed some under-perfusion of the lower lung zones, but to a much less degree than those with acuate MI. The pattern of pulmonary perfusion reverted toward that seen in angina in the follow-up studies of patients with MI. Distribution of ventilation was normal in all patients. There are probably chronic changes in the pulmonary vasculature of patients with arteriosclerotic heart disease which lead to redistribution of pulmonary blood flow toward the apex, and marked under-perfusion of the lung base demonstrated following acute myocardial infarction reflects an acute increase in the pulmonary venous and interstitial pressures most likely due to occult left ventricular failure.

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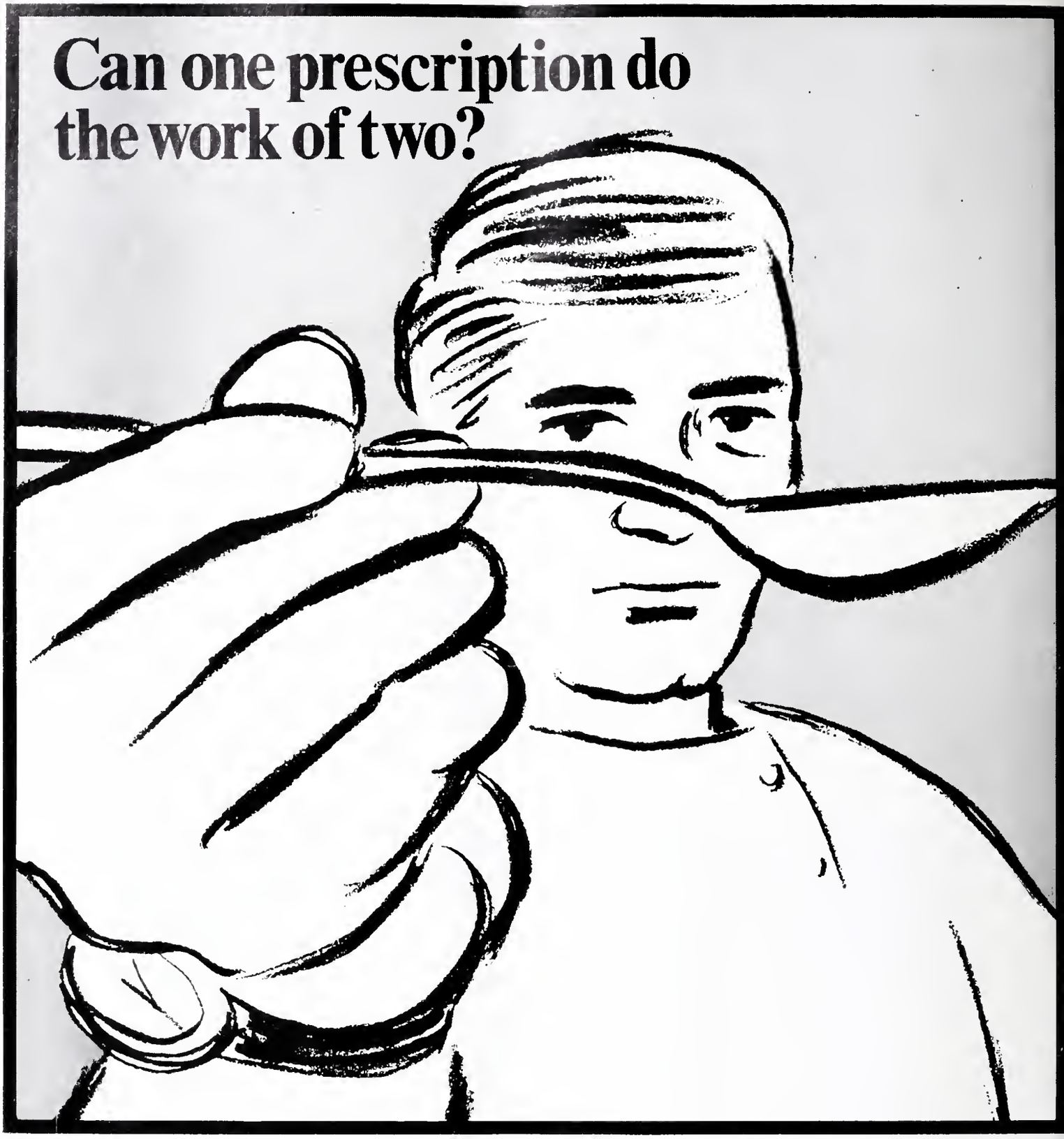

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The Practical Nurse in Today's Setting Or The Practical Solution

By Georgia Lee Tucker*

My topic of discussion today is the Practical Nurse. Why are we becoming increasingly important in today's society; what is our distinctive contribution to the nation's health and well-being and, what is our future?

Perhaps it would be best if we start with Mr. Webster himself to discover just what is a Practical Nurse. Webster defines "practice" as:

1) "to perform or work at repeatedly so as to become proficient"
2) "to do something customarily"

The term "practical" according to Mr. Webster is defined as:

1) to manifest in practice or action
2) capable of being useful
3) qualified to practice

Mr. Webster further defines "practical" as applying to persons and implying success in meeting the demands made by actual living or use.

To "nurse" is defined as:

1) "to manage with care"
2) "to care for and wait on"
3) "to attempt to cure by care and treatment"

If we combine our definitions we will see that a Practical Nurse is one who attains skill in the management of care for the sick through repetition and has been successful in meeting the demands by actual use of her skills and knowledge.

The "Nurse Practice Act of the State of Arkansas," approved March 13, 1967, defines the practice of nursing (for registered nurses) as:

"The *practice of professional nursing* means the performance for compensation of any acts in the observation, care and counsel of the ill, injured or infirm, or in the maintenance of health or prevention of illness of others, or in the supervision and teaching of other personnel, or the administration of medications and treatments, as prescribed by a licensed physician, or dentist; requiring substantial specialized judgment and skill and based on knowledge and application of the principles of biological, physical and social science. The foregoing shall not be deemed to include acts of diagnosis or prescription of therapeutic or corrective measures."

The practice of nursing (for practical nurses) was defined as:

"The *practice of practical nursing* means the performance for compensation in the care of the ill, injured, or infirm under the direction of a registered professional nurse or a licensed physician or a licensed dentist; and not requiring the substantial specialized skill, judgment, and knowledge required in professional nursing."

Now that we have a definition of practical nursing, we should determine how the practical nurse came into being—why we have nurses and why there are different types.

Nursing is as old as man himself. Originally slaves or servants performed the tasks of caring for the sick and injured. With the emergence of Christianity, organized nursing came into being as an expression of its charitable ideal. Orders of both men and women were formed to serve the poor and care for the sick. Hospitals such as Hotel Dieu in Lyons, France, and Santo Spirito in Rome, Italy, were founded as a means to care for the infirm.

During the Renaissance, nursing declined in importance as men adopted the "scientific method." As medicine made startling discoveries of immense significance, man's baser needs were neglected. Not until the late 1700's did nursing begin to come back into being. With the Crimean

*Executive Director, Arkansas State Licensed Practical Nurses Asociation, 2623 Wolfe, Little Rock, Arkansas.

War of 1854 and the appalling conditions on the battlefields, Miss Nightingale rallied the world to the needs of men dying with no continuity of care; men who could not be cared for 24 hours each day by the exhausted Army physicians; men who needed the love, compassion and care of one trained to assist the Creator and the physician in the restoration of health and function.

Miss Nightingale was that rare catalyst which was desperately needed to show society that the scientific methods with all the accomplishments were useless unless someone was able to translate the therapy prescribed by the physician into action for the benefit of the patient.

With the advent of World Wars I and II, nurses again came to the forefront as they were called upon to increasingly minister to the sick and wounded. But, the need far exceeded the supply of trained and dedicated men and women.

In 1893 the Ballard School of New York began a three month course for practical nurses. Other schools opened during the early 20th Century. Not until after World War II did practical nursing really begin to come into its own. The reason was *Need* — Need for young and middle aged persons dedicated and adequately trained to care for the sick; to assist the physician and nurse in their vital ministry; to encourage the patient to gain strength and courage in his struggle for health. From 1960 to 1970 the number of schools educating Practical Nurses increased about 100% due to the need for more nurses and the demand for more nurses.

Where is nursing today? On one hand we *hear* about the crying need for more nurses, better trained nurses and nurses who are more people centered. On the other hand we *hear* about the various concepts of care: continuum of care, total patient care, partial patient care, specialized care, the team approach to patient care, the individualized method of patient care and on ad infinitum until the terms almost seem to blend. But what are all of these experts talking about? What do they mean?

The past few years we have witnessed a unique time in history where science has become a god and the manipular of the machine his helper. We have forgotten that man is more than an intricate arrangement of cells and systems. We have forgotten that man is tripartite—that he has a body, yes, but also a spirit and soul. The meeting of all three needs is where the nurse has best served, at the right hand of the physician—in carrying out his orders; in communicating between patient and other paramedical personnel; in helping the patient to help himself—to retain his dignity as a person in an impersonal world.

But more and more is being required of the nurse. She must be the physician's helper; the coordinator of the various hospital services needed by the patient, the manager of other less skilled auxiliary persons also helping to care for the patient. With the passage of time the nurse became a manager and the patient was often of secondary importance. But, can we exclude the one for the other? I think not. Rather than discuss all of the various types of nursing, let us look particularly toward Practical Nursing.

It is generally accepted that there are both general and complex nursing situations or functions. In the more complex situations, the L.P.N. functions as an assistant to the registered nurse who has the necessary skill, education and judgment to effect the desired results, as the Nurse Practice Act states.

It is the general nursing situations; that is, the ones relatively free of scientific complexity, where the L.P.N. finds her niche. When the "clinical state of the patient is relatively stable and the measures of care offered by the physician require abilities based on a comparatively fixed and limited body of scientific facts and can be performed by following a defined procedure, step by step"; when the "measures of medical and personal care are not subject to continuously changing and complex modifications because of the clinical or behavioral state of the patient"; when "the nursing that the patient requires is primarily of a physical character and not instructional"—this is where the L.P.N. functions both in the hospital and in the physician's office.

But what do these "general situations" actually consist of in a hospital? On a surgical or medical unit they would necessarily differ from the situations in a Coronary Care Unit or an operating room. Shouldn't "general situations" be further delineated so that nurses with more skill and training perform the more complex of the general nursing duties? How do you define general situations?

Some of the hospitals in Arkansas have categorized the L. P. N.'s in order to enable the L. P. N. to work at their present level of competence and to progressively learn and perform more and more

complex nursing duties. This is a laudable effort and assists in the delineation of what should or should not be performed by an L.P.N.

Functions performed by an L.P.N. can be broken into four main areas. These are: First, provision of what is commonly referred to as T.L.C. The second involves the observation, reporting and recording of the patients' conditions. The third is to perform the nursing procedures for which she has been trained. Fourthly, to assist with the rehabilitation of the patient.

The provision of generous doses of Tender Loving Care is vital to mental, emotional and spiritual well being. Here the understanding of human relationships is vital. T. L. C. is more than an understanding and recognition of needs; it is also the consideration given to the patient's needs; the assisting of patients with activities of daily living and giving the cheerful encouragement to the patient in his efforts at the appropriate self care.

But the patient needs more than T.L.C.; he has other needs. The training, education and experience of the L.P.N. is of utmost importance in the observation, recording and reporting of the patient's condition. General physical and mental conditions; signs; symptoms indicative of change must be immediately reported to the appropriate individual—nurse or physician. The stresses in human relationships between the patient and his family or other visitors can often influence the patient's condition.

The third function of the L.P.N. is to perform those nursing duties and procedures for which he or she has been trained and has acquired the necessary skill, knowledge and mature judgment to effectively and efficiently utilize in the performance of the doctor's desires for his patient. The teaching of the various nursing procedures varies somewhat from school to school just as a student's ability to grasp certain information differs from that of other individuals. These nursing procedures can be divided into five basic areas:

a) The administration of medications and treatments prescribed for the patient.

b) The preparation and care of patients receiving specialized treatments.

c) The performance of special nursing techniques in caring for patients with communicable diseases.

d) To begin first-aid measures such as cardiopulmonary resuscitation in life threatening emergencies.

e) The preparation and after care of equipment for treatments, including sterilization and observation of aseptic techniques.

The fourth function of the L.P.N. is to assist with the rehabilitation of patients according to the patient care plan. In this function, training and knowledge are of vital importance. The awareness of patients' abilities and limitations—assisting the stroke patient when he needs the assistance yet encouraging him to help himself, to learn to become self sufficient—to know the difference between "cannot" and "will not." In the rehabilitative function the application of principles—range of motion, body mechanics and preventive health enable the L.P.N. to help prevent potential problems from becoming a dreadful reality for the patient. Such seemingly simple chores as moving the patient to prevent decubiti can be of lasting importance, although it may seem bothersome or even onerous to the patient.

You might ask, where are the Practical Nurses in a hospital? The answer would be—all over. The number and percentages of L.P.N.'s to R.N.'s varies from hospital to hospital and from time to time depending on the supply as well as the demand. In several of Arkansas' larger hospitals, several L.P.N.'s serve under one R.N. on the medical or surgical nursing units. Then again, one L.P.N. may assist several R.N.'s if the patients are more critical or require more expertise in nursing skills and knowledge.

In the specialty units such as Coronary Care Units and Intensive Care Units, the ratio is one L.P.N. to 3 R.N.'s for obvious reasons.

You might also ask, what are the L.P.N.'s doing; what are their functions and what are their responsibilities in a hospital?

On a typical *Medical-Surgical Unit,* the R.N. is almost always the supervisor. On the 7-3 and 3-11 shifts, she is also the charge nurse. On day shifts, the L.P.N. is the one who cares for the patient, giving medications and treatments. She may also team lead—that is, direct other L.P.N.'s and the aides and orderlies in their care of the patient. But, on the night shifts and occasionally on the 3-11 shift, the L.P.N.'s have been made charge nurses. The duties of a charge nurse are many. The charge nurse is the person responsible for: (1) the care of all patients on her unit and (2) the giving of all medications and/or other

treatments required. Should there be 2 L.P.N.'s on a unit, usually they each become responsible for half of the patients. Of course, there are ancillary personnel to assist in patient care.

Let us next examine surgery. Here the L.P.N.'s who have demonstrated their capabilities are usually the "scrub" nurse or the physician's assistant, should he so desire. After many years of experience and demonstration of the following:

a) familiarity of physician routines

b) familiarity with all types of surgical procedures

c) knowledge of sterile technique

d) ability to organize and remain cool under pressure

Some L.P.N.'s are permitted to be in charge of an operating room or may circulate, should the need arise.

In *labor and delivery* the L.P.N. assists the R.N. on all three shifts. Normally she stays with the woman in labor until delivery and then scrubs and/or circulates during the delivery. The only routine examination which she is not generally permitted to perform is that of vaginal examination during labor.

In the *nursery* the L.P.N. functions under the direct supervision of an R.N., but, in some hospitals, also as "charge nurse," although she does have in most instances an R.N. supervisor available in event of emergency and to answer any questions which may have arisen.

L.P.N.'s work almost completely under the supervision of R.N.'s in *Pediatrics* to do patient care, or the most experienced L.P.N. is in charge and responsible for all patient care including the giving of medications and coordination of the other personnel.

In the *Emergency Room,* L.P.N.'s function as the assistant to the phyisician and R.N., although at times they may need to coordinate the other ancillary personnel, or again act as charge nurse. Their functions include assisting with examinations, treatments and admissions. Other duties include the stocking of all supplies, insuring their sterility and being responsible for the cleanliness of the unit.

In the *Psychiatric Unit,* the L.P.N. always functions under the direct supervision of an R.N. Her duties include total patient care, giving of medications and assisting the physician in electroshock therapy, when it is used. Usually the senior L.P.N.'s are permitted to work on the psychiatric unit after having had prior medical-surgical experience.

On the newer specialty units such as the Intensive Care Units, Coronary Care Units and the Surgical Recovery Room, the L.P.N.'s function under the supervision of an R.N., but are responsible for total patient care. In the *I.C.U.* she may function as a team or section leader responsible for the coordination of care for several patients. Under her she may have another L.P.N., an aide or orderly. Her duties consist of the administration of "most" medications, providing tracheotomy and colostomy care when required and under emergency circumstances, the starting of cardiopulmonary resuscitation until a physician or R.N. can administer counter shock or other desired treatment.

In *Coronary Care Units,* the L.P.N.'s have taken the same classes in Coronary Care with the R.N.'s. Although they still function under the R.N., they are able to initiate cardiopulmonary resuscitation and can read ECG's, thus enabling them to greatly assist the physician and R.N. in patient care.

What about the future?

As the physicians' and R.N.'s roles have changed drastically the past few decades, so too has the role of the L.P.N. changed. Let us examine two of the underlying causes of these changes to detect what the future may hold.

(1) The patients' expectations have been altered. No longer does the patient come to the hospital to die but, in order that he might be made functional and well. Medicine has increased the longevity with a resultant increase in geriatrics. Medical care is now a right, or so it would seem if we believe our newspapers.

(2) With the revolutionary changes such as those discussed by Drucker in his book, *The Age of Discontinuity,* enormous changes have and are currently taking place in medicine and its allied sciences. It is generally accepted that the volume of knowledge doubles every 8 to 10 years. Because of the artificial kidney, the heart-lung machine, the pacemaker, to name a few, the roles of the physician and nurse have been altered and these changes have not bypassed the L.P.N. The time of the all knowledgeable generalist is fast disappearing, but the need for basic skills remains. These two factors alone—increasing expectations and increasing change have placed a burden on the nation's health delivery system. In

order to successfully meet the challenge, I propose to you that in the future the L.P.N. will be the generalist which is needed—the person who has the basic albeit limited knowledge, skill and judgment necessary to carry out the orders of the experts. The L.P.N. would be the logical and practical first step toward greater achievements in Nursing. Experience is a great teacher and the background of one year's training would prove invaluable to those aspiring to serve in a more specialized way in the medical hierarchy. Already this trend is becoming evident in the announcement made by the State College of Arkansas in affiliation with the Baptist Medical Center. They are planning to start a career-option program in nursing. This revolutionary program recognizes the need for a ladder or building block approach to nursing careers where one's experience and education is built on previous education and experience; where the L.P.N. can be used as a basis for further education and training, culminating in a baccalaureate or even master's degree in nursing.

The need for more nurses will continue but the time required to effectively teach all the knowledge needed is limited. The practical answer is to let the practical nurse be one of the practical solutions to dilemma of time plus demand. Let's utilize our people's skills, interests and education to further the cause of health in our great society, to encourage young people to enter the health care field with the knowledge that they serve humanity.

Hemostatic Mechanism in the Uterine Circulation During Placental Separation

J. Bonnar et al (Churchill Hosp, Oxford, England)

Brit Med J 2:564-567 (June 6) 1970

The hemostatic mechanism in the uterus during parturition was investigated in 12 patients being delivered by cesarean section. Detailed sequential study of the blood coagulation and fibrinolytic systems in the uterine circulation showed that placental separation is accompanied by a striking local activation of the clotting mechanism. Uterine vein blood draining the placental site while the placenta was separating showed a marked shortening of the whole blood clotting time, a significant shortening of other clotting tests, and sharp increase in factor VIII activity. The changes found in the uterine circulation were transitory and had almost disappeared by the time the blood reached the peripheral circulation. After delivery, the level of fibrinogen and circulating platelets steadily increased and factor VIII activity remained high. Activation of the clotting mechanism during placental separation appears to play an essential role in the control of uterine hemorrhage and the subsequent changes in the hemostatic mechanism in the puerperium are likely to predispose to thromboembolic complications.

Review of 23 Human Lung Transplantations by 20 Surgeons

C. R. H. Wildevuur and J. R. Benfield (Harbor General Hosp, Torrance, Calif)

Ann Thorac Surg 9:489-515 (June) 1970

Available information concerning 23 human lung transplants by 20 surgeons over a six-year period has been compiled. Recipients ranged in age from infancy to 70 years. Operative indications included pulmonary hypertension and respiratory insufficiency both from chronic obstructive pulmonary disease and from restrictive lung disease. Grafts from post mortem donors, four live donors and eight neurologically dead patients were used. Four lobe transplants, 17 whole-lung grafts, and two heart-lung transplants were performed. Bronchial arterial grafting was included once and cardiopulmonary bypass was used seven times. Two relatively compatible transplants were performed. Immunosuppression was relied upon to combat rejection. Derom's first lung transplant lived more than ten months with the transplant essentially his only functioning lung. Five patients died shortly after operation. One heart-lung recipient lived eight days; nine lung recipients survived longer than ten days. Evidence to suggest the increasing consideration of bilateral lung transplant has been advanced.

Strabismus: Early Diagnosis and Treatment

Gaither Johnston, M.D. and F. Hampton Roy, M.D.*

Man and the higher mammals are able to use both eyes together almost from birth with single binocular vision and steropsis. Approximately 2% of individuals at birth are unable to use both eyes together and the stimuli received by the brain in such individuals is different both qualitatively and quantitatively from one with single binocular vision and steropsis.[1] Strabismus, or squint, is a condition in which an individual does not have the ability to direct both eyes at the same point or object at the same time. It may occur as a result of muscle inbalance of the extraocular muscles, refractive errors, congenital anomalies, disease processes, injuries and other reasons.

A baby's eyes do not always co-ordinate during the first few months of life but they should be straight by six months of age. In the past many of the medical profession have thought that this was no particular problem or that the child did not require any ocular attention as he would probably "outgrow" his "crossed eyes." Many parents have been advised to wait until the child was 5-6 years old before seeking an eye examination. The consensus of opinion now is to diagnose and treat strabismus early in order to prevent permanent eye damage (amblyopia) and to correct the cosmetic blemish.

When should a child be seen? We feel that a child should be seen as soon as the strabismus is discovered for the following reasons:

1. A tumor such as the highly malignant retinoblastoma may be obstructing vision and causing the strabismus.[2] Early diagnosis and treatment may prolong the life of this child.

2. Congenital defects of the globe, cornea, lens, retina, or optic nerve may be present so that a blurred image is presented to the brain.[3]

3. In the event that amblyopia (diminished vision from disuse) has occurred, the earlier that it is diagnosed and treatment begun, the better the prognosis for return of useful vision. For example, a year old child would need to have his good eye patched to reverse amblyopia for about a week; a six year old would need to wear a patch for about six months; and an eight year old may *not* have a return of vision in an amblyopic eye as the retina by this age has fully matured.

4. A child's emotional and physical development is partially dependent on good eyesight. Many children have been permanently scarred by looking different and have to endure the cutting remarks of their playmates.

Outlined below are two simple tests to determine if a strabismus problem exists:

1. *Corneal Light Reflex*

Have the patient fixate a light about 13 inches from him. Look to see if the reflex light falls in the center of each pupil.[2] If the light reflex is in the center of each pupil, the eyes are probably straight (Fig. 1). If the light reflex is in the center of one pupil, but is outside the pupil of the other eye, the child probably has an esotropia (Fig. 2). If the light reflex is in the center of one pupil, but is outside the pupil of the other eye, the child probably has an exotropia (Fig. 3). If a prominent fold of skin is present nasally it is easy to assume that an individual has strabismus due to the optical illusion that is presented. This test will readily clarify your findings. If the light reflex is decentered the type of strabismus can then be estimated.

2. *Cover-Uncover Test*

This is a test to decide if the strabismus is a *phoria* (deviation with fusion) or a *tropia* (deviation without fusion). To perform this test have the patient fixate a small light about 13 inches from him. First one eye is covered, then uncovered, the procedure is repeated and one notes behind the cover to see if that eye is turned in or out.[2] If a *phoria* is present and the eye is deviated, it will return to fixate with the other eye when the cover is removed. With a *tropia,* however, the eye will remain in a position of deviation after the cover is removed.

With these two tests, the *Corneal Light Reflex* and the *Cover-Uncover Test* an evaluation of a strabismus may be ascertained and treatment advised.

Treatment is based on a specific diagnosis. If a refractive error is at fault with 1) hyperopia (farsightedness) and esotropia (turning in) or 2) myopia (nearsightedness) and exotropia (turning out); then glasses or ocular drugs would benefit the individual. If paralysis of one or more extraocular

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Reprint requests to Little Rock Veterans Administration Hospital, 300 East Roosevelt Road, Little Rock, Arkansas 72206 (Dr. F. H. Roy). Supported in part by NIH #2Tol and NB 10041-02 from National Institute of Health.

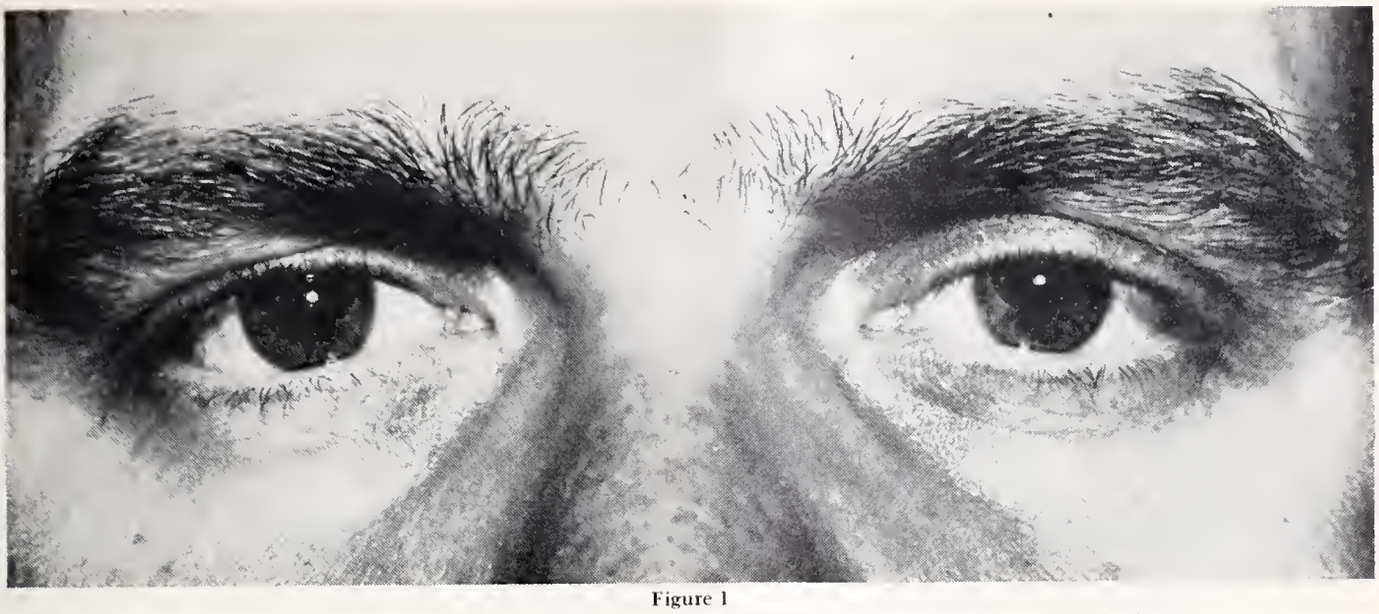

Figure 1
Corneal Light Reflex Test—Note that light reflex is in the center of each pupil and the eyes are straight.

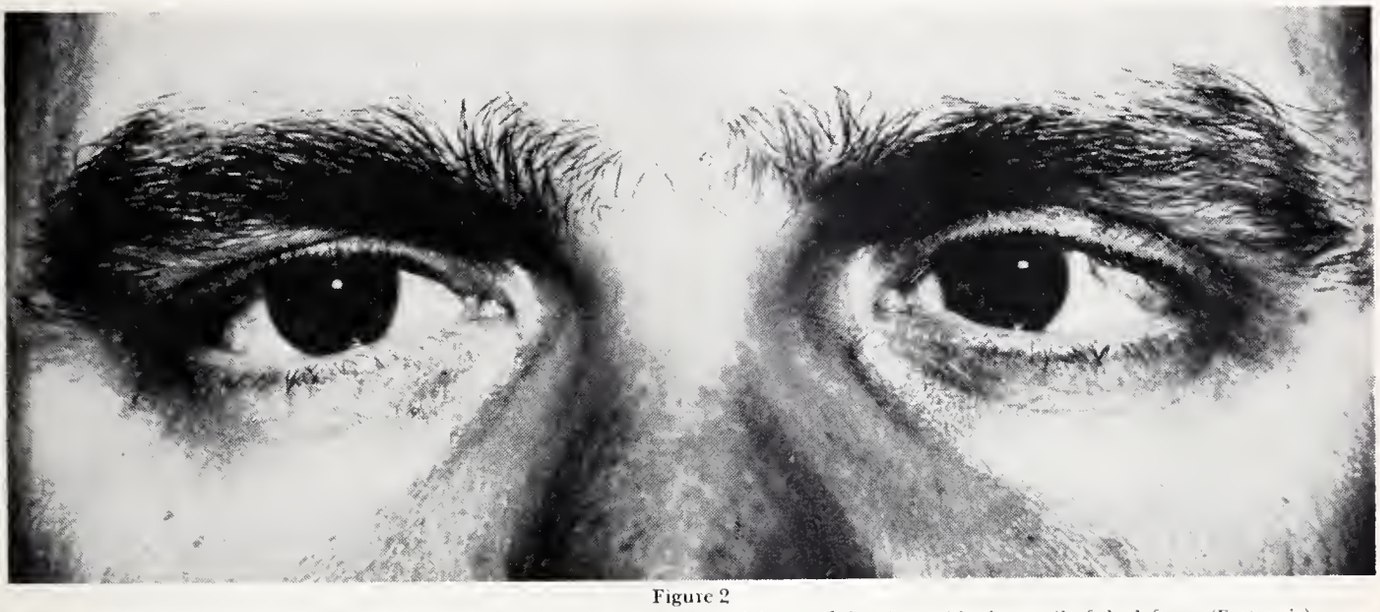

Figure 2
Corneal Light Reflex Test—Note that light reflex is in the center of the right pupil, but is outside the pupil of the left eye (Esotropia).

Figure 3
Corneal Light Reflex Test—Note that light reflex is in the center of the right pupil, but is inside the pupil of the left eye (Exotropia).

muscles is found to be a cause of the strabismus then surgery would be of benefit. A paralysis of extraocular muscle may have an intracranial cause such as a brain tumor which may need investigation. If one of the more dire etiologies is found such as retinoblastoma then it would be necessary to enucleate the eye followed with post-operative x-ray and anti-metabolite therapy. In this instance the life could very well be saved.

In all cases of strabismus, the earlier the diagnosis and treatment, the better the functional and cosmetic result.

Summary

Early diagnosis and treatment of strabismus is very important to obtain a good functional and cosmetic result as well as to help one so afflicted to grow into a mature, stable, productive individual. Two simple diagnostic tests are presented to help with an early diagnosis. Both of these two tests, the *Corneal Light Reflex* and the *Cover-Uncover Test* may be performed in the office with a minimum of time and equipment.

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Amantadine Dosage in Treatment of Parkinson's Disease

J. D. Parkes et al (King's College Hosp, London)
Lancet 1:1130-1133 (May 30) 1970

Forty-three patients with parkinsonism were included in a trial of amantadine, with doses of 100, 300, and 500 mg/day being given each for two weeks in random order to all patients. Results confirmed the benefit seen with amantadine in previous trials and showed considerable individual variation in optimum dose; the preferred dose was 300 mg/day which resulted in a 26% reduction in initial disability score. The results at each dose level were independent of age, sex, duration of disease, concurrent medication, or type of disease. The response to amantadine at each dose level was greatest in most disabled patients. Side effects suggestive of atropine intoxication could be eliminated in some cases by reducing or stopping concurrent medication with trihexyphenidyl coenzyme A and its esters.

Suprapubic Aspiration of Urine in Diagnosis of Urinary Tract Infections During Pregnancy

L. Paterson, A. Miller, and A. Henderson (Royal Maternity Hosp, Glasgow, Scotland)
Lancet 1:1195-1196 (June 6) 1970

The withdrawal of urine by suprapubic aspiration is a suitable method where it is important to obtain a specimen free from contamination. In 429 such specimens obtained from pregnant or recently delivered women, 65% of the sterile specimens came from patients with symptoms suggestive of urinary tract infection (UTI). Of all those with symptoms, only 41% actually excreted bacteria in the urine. Of the symptoms considered only pyrexia was commoner in infected cases. The traditionally accepted signs and symptoms are of little help in diagnosing UTI in pregnancy and it is necessary to demonstrate the presence of bacteria in an uncontaminated specimen.

Hypertension in Young Women Receiving Anovulatory Steroids

A. M. Lansing (Univ of Louisville School of Medicine, Louisville)
Ann Surg 171:731-734 (May) 1970

Based on four case reports, the author warns that in a few susceptible individuals administration of anovulatory steroids may produce hypertension which may not be detected in surveys of large groups but which can be detected by recording blood pressure before medication is started and comparing it with one taken a few months later. Rapid resolution of the blood pressure increase after medication is withdrawn suggests a cause-and-effect relationship, particularly when it can be demonstrated to recur with reinstitution of the therapy. The renin-angiotensin-aldosterone system is involved perhaps along with the metabolic effect of estrogens in producing salt and water retention.

Vesicocolic Fistula: Strongyloides Stercoralis in the Urine (A Case Report)

Ralph A. Downs, M.D.* and Ivan L. Frye, M.D.**

The purpose of this paper is to report an unusual case in which round worms were found in the urinary sediment. This discovery led to the diagnosis of a Vesicocolic Fistula. Preliminarily the clinical aspects of this condition are discussed.

Since Cripps[1] classic thesis entitled, "The Passage of Air and Feces through the Urethra" was published in 1888, these symptoms have been historically associated with an intestional-urinary fistulae. Pneumaturia occurs in 90% of the cases.[2] It is not however, necessarily diagnostic of this disease since it may also accompany bladder infections produced by gas forming organisms. Feculuria is pathognomonic; it occurs in approximately 70% of the cases.[2]

Symptoms of cystitis usually precede such dramatic complaints as those described above. When the fistula remains small the symptomatology may not progress beyond this point. Complaints due to underlying colonic disease may be percursatory, but once fecal soiling of the bladder takes place, the urinary symptoms usually become dominant. The retrograde passage of urine per rectum may occur, but it is rare.

Other etiological factors include penetrating wounds, abscess formation of the seminal vesicals or prostate and iatrogenic courses such as those resulting from irradiation therapy, colonic or urological surgery.

The diagnosis of the Vesicocolic Fistula is made in the majority of cases by cystoscopy; approximately 70% of the cases are diagnosed endoscopically. The fistulous opening is usually found in the left dome of the bladder. The opening may be[2] demonstrated radiographically by catheterizing it with a ureteral catheter and instilling an opaque media. (Fig. 1)

The cystogram may be diagnostic if the opening is large and a dilute solution of opaque media is used. This is demonstrated in Fig. 2. Due to

Figure 1
Tranvesical catheterization of Vesicocolic Fistula with retroinjection of opaque media into the colon.

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Figure 2
Cystographic dye passing into the colon through the Fistula.

the viscosity of barium and the fact that the rectosigmoid overhangs the bladder anteriorly, colon x-rays are not usually diagnostic. However, in the case presented below, extravasation of the barium into the bladder did occur. (Fig. 3) It is noted that the patient is in the oblique position so that the bladder can be visualized behind the rectosigmoid. Sigmoidoscopy is of little diagnostic value.

In cases that are not readily diagnosed by the above methods, instillation of a dye such as methylene blue or indigo carmine into the bladder followed by an attempt to detect its appearance in the colon, or vice versa may be beneficial. Another technique is to feed the patient a non-absorbable compound such as barium, mineral oil or charcoal with subsequent efforts to recover these substances in the urine. When positive, these tests prove the presence of an intestinal-urinary fistula but are not specific in locating the site of the opening.

The passage of undigested fecal components, per urethrum, may be the initial complaint in some cases; these are usually seeds of various fruits, vegetables, or berries. This many-faceted disease, consequently, may have an horticultural side. The type of seed one dispenses depends on the size of the fistula and selectivity of the individual's diet.

Figure 3
Barium enema demonstrating Fistula.

The passage of intestional parasites in the urine as described in the case presented below is rare. On review of all the Vesicocolic Fistulae reported prior to 1958; there was only one other case found. This[3] was described by Mouchet; a case in which ascaris lumbricoides were found in the urine.

Case Report (A 79 Year Old Female)

This patient was first seen in November of 1969, complaining of frequency and dysuria. She was found to have a marked pyuria. After the patient had been on a course of Antibiotics for approximately two weeks, urological studies were carried out. Intravenous pyelograms were done which showed no definite abnormalities. Cystoscopy was done, but it was found that the bladder was grossly infected and consequently, it could not be inspected adequately. The patient was found to have a slight meatal stricture. The urine culture grew out an E. Coli that was resistant to all Antibiotics except Chloromycetin and Neg-Gram. The patient was given one week's course of Chloromycetin 250mg q.i.d. followed by NegGram 500mg q.i.d. for several weeks.

The patient had a past history of "chronic arthritis" and had been treated with small doses of Cortisone over a period of approximately three years. She had no history of any other serious illness or major surgery. There was no history of TB exposure.

The patient was not seen again until 1/9/70. At this time she was admitted to the Van Buren County Hospital in Clinton, Arkansas. Microscopic examination of the urine revealed "round worms" in the urinary sediment. The urine was grossly infected. A barium enema showed an area of spasticity in the rectosigmoid.

The patient was transferred to the Arkansas Baptist Medical Center in Little Rock, Arkansas on 1/19/70. At this time the patient was passing fecal material in the urine and had definite pneumaturia. The BUN and fasting blood sugar was normal. The chest x-ray and EKG was normal. Strongyloides stercoralis was found in a catheterized urine specimen and in the fecal.

The fistula was found endoscopically in the left dome of the bladder. Catheterization of this fistula with a ureteral catheter was successful; the opaque media is seen instilling into the colon (Fig. 1). Following this a cystogram was obtained,

which also shows the extravasation of dye into the colon (Fig. 2). The diverticulitis of the colon and appearance of barium into the bladder is shown in Fig. 3.

On 1/22/70 a colon resection and excision of the vesicocolic fistula was performed. An end to end anastomosis of the colon and primary closure of the wound was done.

This patient's post operative course was complicated by a superficial wound infection, but otherwise uneventful. She was discharged on 2/11/70, on her 22nd post operative day.

The patient was placed on Gentian Violet and Sulfonamide therapy. She was seen post-operatively on 2/27/70 at which time her wound was healed. She had no specific complaints. A catheterized urine specimen revealed no evidence of intestinal parasites. Further follow-up examinations were arranged.

Summary

1. A case of Vesicocolic Fistula is reported in which strongyloides stercoralis was found in the urine.
2. The etiologic, symptomatic and diagnostic aspects of this condition is discussed.

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Some Applications Of Immunology To Clinical Allergy

Authors — Helen Rountree, M.D.*
Vida H. Gordon, M.D.**
Editorial Director — Jerry G. Jones, M.D.***

There are many applications of immunology to clinical allergy. The authors have chosen four that have particular pertinence in the evaluation of the existence and treatment of allergic disease.

Four types of allergic reactions are responsible for clinical hypersensitivity and disease. They are as follows: Type I, which is anaphylactic and reagin dependent; Type II, which is cytolytic or cytotoxic; Type III, which is the Arthus reaction; and Type IV, which includes delayed reactions.[1] These are the pathways by which an individual "sensitized" by a previous experience with an allergen may react and, if the reaction is intense enough, suffer as a result of the allergic state. The "allergic state" denotes altered reactivity to an antigenic substance, and the "immune state" is the protection against the biological effects of an antigen or organism carrying the antigen. The following table (Table I) illustrates the four types of allergic reactions which may be harmful to the tissues and harmful to the host. (See also Fig. I.)

TABLE I
CLASSIFICATION OF ALLERGIC REACTIONS
(Modification of Ellis, E. F.[7] from Gell, P.G.H. and Coombs, R.R.A.[1])

Anaphylactic	Type I	— Concerns Allergists—Complement is not involved in anaphylactic reactions.
Cytolytic or toxic	Type II	— Drug induced Hemolytic Anemia and Transfusion Reaction C'1 — C'9
Arthus	Type III	— Chemotaxis of polymorphonuclear cells and WBC release of proteolytic enzymes and complement (C'5 — C'7).
Delayed or Tuberculin	Type IV	— Interaction of sensitized mononuclear cells ie. Contact dermatitis.

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Anaphylactic Reaction

A Type I reaction results in the release of chemical mediators, such as heparine and histamine, by the target cell. The action of histamine on the blood vessels in the skin is responsible for

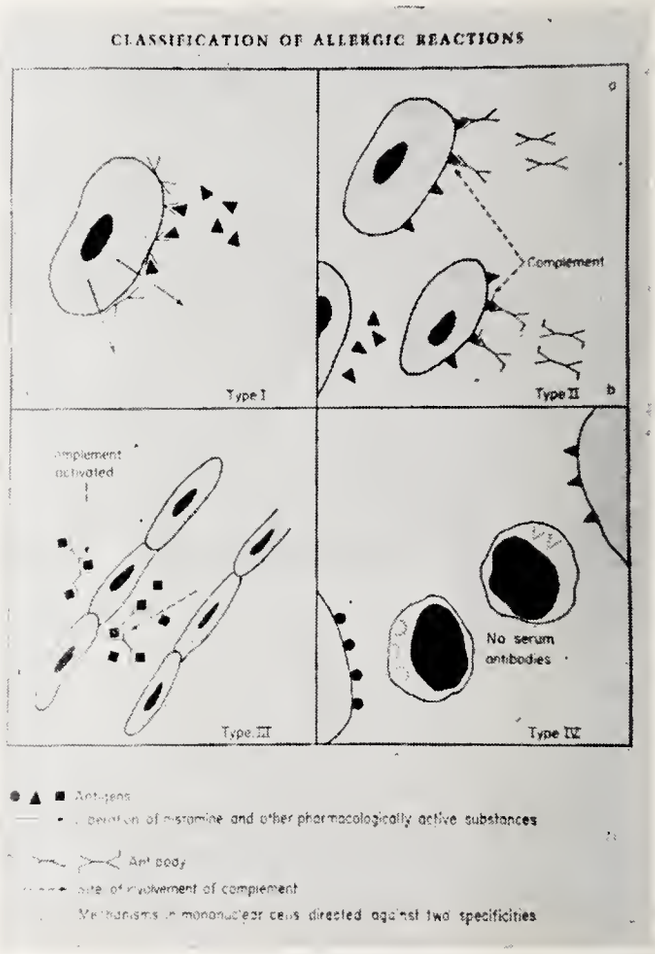

Figure I
Classification of Allergic Reactions
(Reference 1. Courtesy of F. A. Davis Co., Philadelphia, Pa.)

the wheal and flare response observed in the positive skin test reaction.[1]

Monkeys and certain other primates produce reagin-like antibodies which are fully comparable to human reaginic antibodies in their tendency to bind strongly to the cells of the species which produced them. The reagin-like antibodies will not bind in the same way to the cells of a different species. An exception to this is that human reagin will bind to monkey tissues to some extent, and monkeys are now used for Prausnitz-Küstner tests with human sera instead of humans.[1] Reagin or atopic antibodies must have the capacity to be passively transferred to the skin of a non-sensitized individual (P-K test). The guinea pig is unusual in that non-reaginic antibodies from rabbit and man will bind the guinea pig's cells in the same way apparently that its own $gamma_1$ antibodies bind to the animal's own cells. Reagin-type antibodies are detected in experimental animals by a test essentially identical to the Prausnitz-Küstner test used in man. This test is known as the passive cutaneous anaphylactic reaction (PCA).[1] Guinea pigs are the animals most frequently used for this test because they react well and guinea pigs are cheap for use in the laboratory.

In the passive cutaneous anaphylactic or PCA test, serum dilutions of 1/10 of one ml. of antibody are injected intradermally into shaved areas on the two sides of the guinea pig's body. Four to five hours later the animal is given an intravenous injection of 1 mg. of antigen plus 2.5 mgs. of Evan's Blue dye in a total volume of 1.0 ml. Although no whealing is visible, the increased vascular permeability produced at the site of the antigen-antibody reaction leads to the escape of the dye causing a "blueing" of a circular area of skin which varies according to the dilution of the antigen. This technique affords a delicate quantitative measure of anaphylactic antibody.[2]

Cytotoxic Reaction

In Type II, or the cytotoxic reaction, the antibody is usually of classical type, IgG or IgM. Antibodies react with antigenic determinants that are an integral part of the cell membrane, or with antigens attached to the cell membranes. The mechanism of destruction of the cell depends partly on the nature of the antibody and partly on the kind of cell. Complement is frequently involved. One clinical example of this kind of reaction is a *transfusion reaction* due to a major blood group incompatability, in which lysis may occur intravascularly.[1] The incompatible donor red cells interact with the recipient's isohemagglutins. The complement system is activated in this reaction and the sequential action of all 9 components results in lysis of the red blood cells. Under the circumstances of incompatible transfusions, the presence of sensitized cells, either with or without participation of complement, may hinder the functioning of the reticuloendothelial system. White cells of the blood can be similarly involved.[3]

Another example of the cytotoxic reaction is *penicillin-induced hemolytic anemia.* In this case, red blood cells to which penicillin has become non-specifically absorbed are lysed by anti-penicillin precipitating antibodies in the IgG and IgM fractions, in the presence of complement. A third example of a Type II reaction is the acute glomerulonephritis of *Goodpasture's Syndrome,* in which anti-glomerular basement membrane antibodies react with glomerular basement membrane antigens, in the presence of complement, to cause glomerular damage.[3]

Arthus Reaction

In the Arthus or Type III reaction, injected antigen reacts with circulating precipitating antibody found in the $gamma_2$ fraction to form microprecipitates in and around blood vessel walls. This causes vascular damage and thrombosis locally. The antigen-antibody complexes activate complement and the C'5, 6, 7 complex is chemotactic for polymorphonuclear cells, thus attracting these cells to the site of the reaction. Here the dying leukocytes liberate proteolytic enzymes that contribute to necrosis of vessel walls. Both IgG and IgM antibodies may produce the reaction.[3,4] Polymorphonuclear cells are essential for this reaction. The reaction begins within an hour and reaches a peak in 4 to 12 hours.

The Arthus reaction is not like the PCA reaction in that: (1) it does not require tissue fixation of the antibody; (2) passive transfer of this type of sensitivity does not demand an incubation period; (3) there is no primary degranulation of mast cells; and (4) the reaction is not suppressed by antihistamines.[4]

Lesions of the Arthus type are *not often seen in clinical medicine.* It has been suggested that too frequent "booster" injections of tetanus toxoid can result in local reactions of the Arthus type in affected individuals.[3]

Delayed or Tuberculin Reaction

The delayed reaction or Type IV is also referred to as bacterial or tuberculin-type allergy and is *cell-mediated*. It is commonly induced with infectious agents, certain chemicals and foreign animal cells. There are no circulating antibodies of the conventional type involved in the delayed reactions and the serum does not transfer sensitivity to other animals.[4] It can be transferred by living cells.[4]

Although formerly there was thought to be no chemical mediator for this reaction, recently a soluble factor of undetermined chemical composition called the lymph node permeability factor (LNPF) has been proposed as a possible agent.[5] This may be the same as Lawrence's "transfer factor".[6]

Another recent discovery of great interest is a soluble factor produced as a result of the interaction of sensitized lymphocytes and specific antigen. This soluble factor inhibits the "in vitro" migration of normal macrophages and has been named migration inhibitory factor (MIF).[3] Purified preparations of MIF injected intradermally in normal guinea pigs produce reactions which histologically resemble delayed reactions.

An example clinically of delayed hypersensitivity or Type IV reaction is *poison ivy dermatitis*.

Immunology of Pulmonary Disease

The lung and the skin are the two organs most frequently the site of diverse and dramatic allergic reactions. The sudden and possibly fatal result of some reactions in the lungs demands a quick and accurate diagnosis. It is important to realize that in any one pulmonary disease, more than one type of allergic response may be present. Also, in any one type of allergic response there may be more than one form of antibody, such as the occurrence of both tissue-sensitizing and precipitating antibodies.[1]

TABLE II
IMMUNOLOGY OF PULMONARY DISEASE*
(Modification of material presented by Ellis, E. F. and Gell & Coombs[1, 7])

	IgG	IgE	D.H.
Allergic Asthma	—	+	—
Farmer's Lung	+	—	—
Goodpasture's Syndrome	+	—	—
Allergic Aspergillosis	+	+	—
Loeffler's Syndrome	+	+	—
Tuberculosis	—	—	+

*Modification of material presented by Ellis, E. F. and Gell & Coombs[1, 7]

Table II shows that there are several types of antibodies involved in different allergic pulmonary diseases. *Reagin antibodies* in the immunoglobulin E fraction are detected in increased amount in allergic asthma.

Precipitating antibody in the immunoglobulin G fraction is found in *Farmer's Lung*,[7] which is a pulmonary disease due to the inhalation of the dust of moldy hay or of other vegetable produce. It is characterized by symptoms and signs attributable to a reaction in the peripheral alveolar tissue of the bronchopulmonary system.[1] In a small number of these patients, if atopic and exposed to the same dust, the bronchi are affected and asthma is produced.

A precipitating antibody in IgG is also found in Goodpasture's Syndrome, which is acute glomerulonephritis associated with a diffuse pulmonary hemorrhage.[1]

Although IgG antibodies predominate in the immune response in *Allergic Aspergillosis*, IgE is also involved.[7] Aspergillus fumigatus may induce the immediate type of hypersensitivity, characterized by allergic manifestations of the inhalant type and immediate whealing skin reactions, as in pollenosis.[8]

Antibodies in the IgG and IgE fractions are present in *Loeffler's Syndrome*.[1] This syndrome consists of a simple transient pulmonary eosinophilia frequently associated with fever, but without asthma. It is due to a mild allergic reaction to a very large number of antigens which are inhaled or distributed through the body from other sites.[1] *Delayed hypersensitivity* is the mechanism involved in tuberculosis.

Immuno-Therapy

One of the most important applications of immunology to clinical allergy involves immunotherapy. There have been three possible mechanisms proposed for the explanation of the improvement of certain individuals following immuno-therapy or hyposensitization:[7]

1. *Blocking antibody* in the IgG fraction has received the most attention in attempting to explain improvement seen in some patients as a result of hyposensitization therapy. These antibodies are increased quantitatively during regular hyposensitization.

2. Another possibility is the induction of *immunologic tolerance* or a [illegible]ific immunologic unresponsiveness to an a[illegible]mulus. The kinds of antigens found in nature, [illegible] as pollens, are complex macromolecules composed

of numerous chemical configurations, each capable of evoking an immune response. Certain determinants may preferentially stimulate reagin or IgE synthesis. Induction of tolerance to these particular determinants and not to others would allow the synthesis of blocking antibodies with specificities toward particular antigen such as ragweed.[3]

3. The improvement following hyposensitization injections could also involve creation of "*nontoxic allergen-antibody complexes*" in the presence of "in vivo" antigen excess.[3] Antigens and antibodies interact with each other in certain ratios, depending mainly on the relative proportion of the reactants to each other. The antigen-antibody complexes formed "in vitro" in ratios of moderate antigen excess have the greatest biologic activity. It has been shown that complexes formed in great antigen excess are less destructive than those formed with lesser antigen levels. It might, therefore, be possible by injecting large amounts of antigen to favor the formation of "nontoxic complexes".[3]

Whatever mechanism one favors, be it blocking antibody, tolerance or formation of "non-toxic antibody complexes", hyposensitization regimens which provide high doses of allergen would have more reason to work than those providing minute amounts.[3,7]

We would like to mention three important tests that are currently being used in the fields of allergy and immunology and their significance. The tests involve histamine release, lymphocyte transformation and skin window techniques.

Histamine was the first chemical substance suggested as a pharmacological mediator in anaphylaxis. Others have been identified since then, but histamine remains the best characterized and is the most important in the mediation of local allergic reactions.[9]

Most of the methods used to study the individual steps in the allergic reaction sequence are based on the measurement, by biological or chemical techniques, or histamine released in the course of the reaction. For example, the size of the wheal and erythema response to an intradermal injection of an allergen in a sensitized individual is a function of the quantity of histamine rele[illegible] site.[9]

[illegible]cyte Histamine Release Test

[illegible]he reaction "in vitro" with specific allergens resulting in the release of histamine from sensitized human leukocytes was first described by Katz and Cohen in 1941. The description by Lichtenstein and Osler of a simplified cell suspension system consisting of isolated washed leukocytes in serum-free buffer has permitted characterization of immunological parameters involved in the allergic response.[9]

The leucocyte histamine release test requires 50 ml. of blood and is essentially an all day procedure for the technician.

The leukocyte histamine release phenomenon is antigen-specific and cannot be produced in non-allergic leukocytes. The leukocytes obtained from non-allergic donors can be passively sensitized "in vitro" using the serum of known allergic individuals. The leukocytes, when challenged with specific antigens, will release histamine.[10]

The histamine release test can be useful in several ways:

1. To determine if an individual has a significant amount of antigen-specific IgE in his leukocytes,
2. To obtain a qualitative measurement of the amount of antigen-specific IgE present in his serum,
3. As an "in vitro" passive transfer test, utilizing type-compatible non-allergic leukocytes coated with IgE from an allergic individual's serum,
4. To determine the amount of blocking antibody present in serum and,
5. As an index to the effectiveness of hyposensitization.[11]

This test is mainly used on a research basis and is too complicated and too time consuming to be available in most clinical laboratories.

Lymphocyte Transformation Test

The lymphocyte transformation test is most useful for the evaluation of the delayed hypersensitivity reaction to drugs. The observation that phytohemagglutinin (PHA), an extract of the red kidney bean, could induce blastogenic activities in tissue-cultured small lymphocytes was followed shortly by the finding that the same change could be induced with specific antigen. The antigen-induced transformation has been of special interest to allergists since blastogenic transformation has been reported with lymphocytes from individuals sensitive to certain drugs.[3]

The lymphocyte transformation test requires 60 ml. of venous blood collected aseptically. Isolated lymphocytes are cultured in a plasma

medium *in the presence of the antigen*, usually a drug, for which the serum is being tested. Control cultures, consisting of lymphocytes from the same patient, are cultured under the same conditions, but *in the absence of the drug*.

This test is considered positive if cultures contain more than 4% blast cells after 4 days of culture in the presence of antigen, provided that the control lymphocyte cultures of the *same patients, in the absence of antigen,* and the control cultures of lymphocytes from *normal individuals, in the presence of the same antigen,* contain less than 2% blast cells.[12]

The lymphocyte transformation test, because of its specificity and reproducibility, appears to be very promising as an "in vitro" technique for the diagnosis of drug allergy. Lymphocyte cultures from numerous patients sensitized to various drugs such as penicillin, aspirin, local anesthetics, various antibiotics, ACTH, insulin and iodinated substances have been studied with appropriate controls. The test is regularly positive in the case of a clinically proven allergy when the antigen, usually a drug, is present in culture. It is always negative in the absence of antigen or in the case of nonallergic individuals who have taken the same drugs. One advantage is that the test is positive whether the allergy is of the immediate type or the delayed type. Corticosteroids inhibit lymphoblastic transformation both "in vitro" and "in vivo."[12] One disadvantage is that not all clinical laboratories can be set up to do it.

Skin Window Technique

A third immunological technique which has clinical implication is the skin window. According to the studies done by Lowell on atopic individuals with seasonal hay fever or asthma, there is a striking eosinophilic response in these people prior to hyposensitization and a *decrease in the eosinophilic response* after hyposensitization therapy.[13, 14] Since the intensity of the eosinophilic response seems to correlate well with the clinical sensitivity to pollens, this technique is helpful in evaluating hyposensitization treatment.

Figure II shows a photograph of a skin window made on one of the second author's allergy patients. Almost all of the cells in this photograph are eosinophils. Of 1000 cells counted, 94.8% were eosinophils. Following one year's allergy treatment the skin window count on the same patient was 41.8% of 500 cells counted.

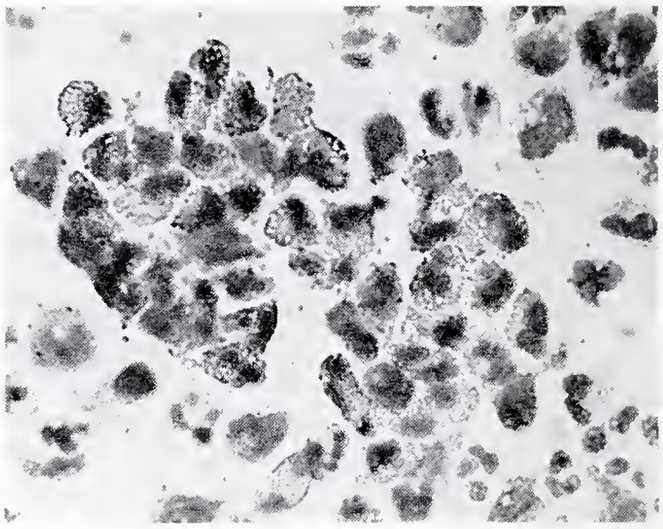

Figure II
Photomicrograph of skin window. Almost all cells are eosinophiles. [Unpublished data of senior author (VHG).]

The skin window correlates well with positive scratch tests to foods and may be helpful in ruling out false positive skin tests. If the percentage of eosinophils present in the antigen window is more than 3% greater than, or if the total count is more than 3 times the control preparation, the result is positive. Both controls and allergic individuals have peripheral blood eosinophilia, whereas, only allergic children have skin window eosinophilia.[15]

Conclusion

We have discussed the 4 types of allergic reactions and some of their applications to clinical hypersensitivity and allergic disease. We have pointed out that Type I or the anaphylactic reaction is the one that concerns allergists, primarily.

Three possible mechanisms have been discussed that may explain the improvement in certain individuals following hyposensitization therapy. Three tests have been described: the histamine release test, the lymphocyte transformation test and the skin window technique. All have practical application in clinical allergy.

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Antibiotics in Surgical Treatment of Septic Lesions

W. H. Rutherford et al (Royal Victoria Hosp, Belfast, Ireland)

Lancet 1:1077-1079 (May 23) 1970

In a controlled clinical trial of the treatment of three types of septic lesions, the penicillin-resistance rate of staphylococci was 73%, and the average healing time of a group of patients who had been given cloxacillin was about half a day less than that of similar patients who had not been given any antibiotic. This difference was not significant at the 5% level. An analysis of the results by the preference technique showed that the excess of preferences for cloxacillin was not significant at the 5% level. There is, therefore, no evidence to suggest that antibiotic cover with cloxacillin reduced the healing time of these septic lesions by an amount likely to be of clinical value.

Fluorescent Treponemal Antibody Absorption in Lupus Erythematosus

S. J. Kraus, J. R. Haserick, and M. A. Lantz (National Communicable Disease Center, Atlanta)

New Eng J Med 282:1287-1290 (June 4) 1970

Several serologic tests for syphilis (VDRL slide, FTA-ABS, and TPI) were performed on sera from 150 patients with lupus erythematosus. Twenty-four patients had reactive VDRL tests and one had reactive TPI test. Twenty-three patients showed some degree of fluorescence in the FTA-ABS test; four were reactive, one of which had the reactive TPI test, and eight were borderline. The other 11 sera showed an atypical beading fluorescence pattern, in contrast to the homogeneous pattern of fluorescence usually seen. VDRL reactivity and FTA-ABS fluorescence in the LE group were independent variables. No clinical or historical evidence of syphilis could be found in any of the 23 patients. A control group of 75 normal individuals showed no reactivity in the VDRL, FTA-ABS, or TPI tests.

Sleep Habits and Symptoms in Male Medical and Surgical Patients

M. W. Johns et al (Dept of Surgery, Alfred Hosp, Victoria, Australia)

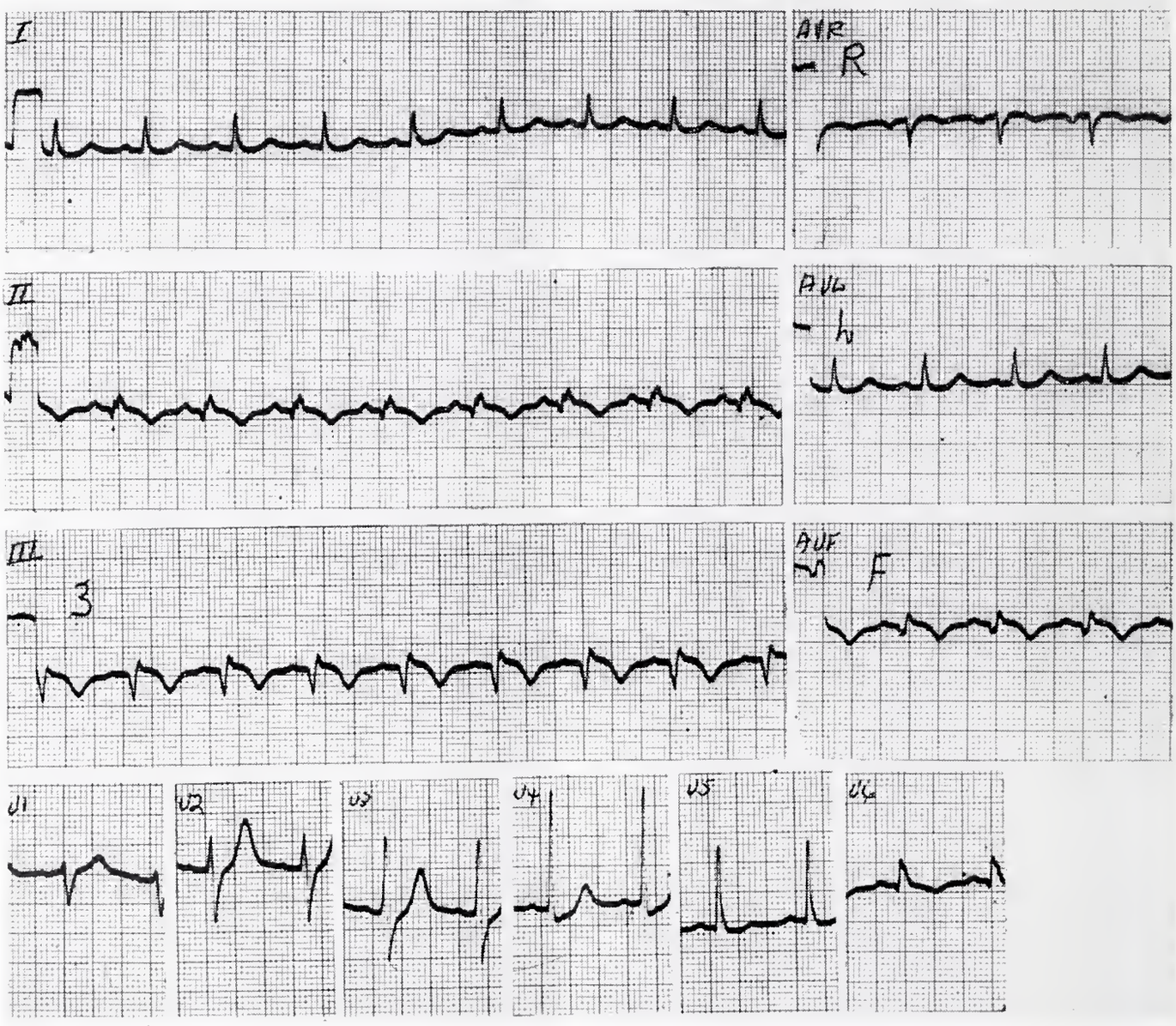
Brit Med J 2:509-511 (May 30) 1970

A sleep questionnaire and the Cornell Medical Index Health Questionnaire were used to investigate symptoms and sleep habits at home in male medical and surgical patients. The duration of sleep at night was similar to that reported for the general population, decreasing with age from 20 to 50 years, and increasing again after 60 years. The duration of daytime sleep increased with age. The degree of sleep disturbance in different patients was compared in terms of the total duration of sleep and the time spent lying awake in bed at night. Increasing age, ischemic heart disease, and neurotic illness were the main factors found to be associated with long-term sleep disturbances.

ELECTROCARDIOGRAM OF THE MONTH

TEST TRACING NO. 92
AGE: 47 SEX: M BUILD: Medium BLOOD PRESSURE: 120/80
CARDIAC DIAGNOSIS: Arteriosclerotic heart disease?
OTHER DIAGNOSES: None
MEDICATION: None
HISTORY: History vague, recent substernal pain night before.

See Answer on Page 207



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 207

D. I. Purcell, M.D.

HISTORY: The patient is a two year old child who gained weight normally up to nine months of age. She was then noted to have a thick tongue, dry skin, lethargy and edematous eyelids.

PUBLIC HEALTH AT A GLANCE

The Pesticides Program Of The Arkansas State Department Of Health

Pesticides have made significant contributions toward improving man's health and well-being. By controlling insects, weeds and other plant pests, pesticides have made it possible to produce an abundance of food, feed and fiber products on a declining farm acreage. Insecticides have played an important, world-wide role in controlling insect-borne diseases such as malaria, typhus, dysentery and plague. In addition, outdoor recreational pursuits have been enhanced by the control of noxious insects and other pests.

Since World War II, the size and scope of the pesticide industry has increased tremendously. This is reflected in the exceptional upward trend in pesticide sales—increasing at the rate of 16% per year and estimated to reach the $2 billion mark in 1970. Nationally, about 390 basic chemicals and over 60,000 pesticide formulations are used to control insects, weeds, rodents, nematodes and plant diseases.

In tandem with the massive increase in production and use, the potential health hazards of pesticides have increased proportionately. Because of the complexity and significance of pesticide-related health problems, the Arkansas State Department of Health has initiated a Pesticides Program for the purpose of studying and appraising the effect of pesticides on human health in Arkansas. When applicable, this program is also concerned with instituting corrective solutions for alleviating these problems.

Basic Activities of the Pesticides Program

Pesticide Usage Profile: Studies are under way to determine the pesticide use spectrum as applied to the overall employment of pest control chemicals in the state. This study will include the classes of pesticides used, particularly as related to toxicology and persistence, in both rural and urban situations; the principal users and areas of heaviest application; the periods of critical usage; the methods of application or dispersal; and the location of formulation plants, custom-applicators and waste disposal sites.

Morbidity and Mortality: Attention will be directed toward developing adequate reporting procedures for collecting information on pesticide associated illnesses or poisonings as they occur. Hopefully, this will be accomplished through the local public health department working with medical societies and poison control centers.

Environmental Sampling: Selected air sampling activities will be conducted to provide information about the extent of atmospheric contamination with pesticides. Other environmental samples may be collected and analyzed as facilities permit.

Human Monitoring: A section of this study involves a national program to determine the storage levels and trends of certain organochlorine pesticides and their metabolites in the general population. Surveys will also be conducted to determine occupational hazards to workers who are constantly exposed to pesticides, with the objective of instituting meaningful guidelines for health protection in this vocation.

Safety: Formulation plants, warehouses, dealers, custom applicators, pest control operators, nurseries and certain industries, farms and homes will be surveyed to determine the handling, storage and application precautions utilized.

Transportation of Pesticides: Accidental spills that occur during transportation of pesticides present problems of decontamination and disposal. Reporting and investigative procedures with regard to intransit spills will be developed.

Waste Disposal: Manufacturing wastes, "Handling" refuse and used containers are sources of environmental contamination and accidental poisonings. Corrective procedures will be formulated to assist local health units in coping with this critical disposal problem.

Laboratory Competence: Upgrading the State Laboratory through the use of modern analytical equipment and improved methodology is underway. Other activities will include the development of technical assistance programs for local health units.

Pesticide Legislation: A review of existing state legislation and local ordinances will be conducted with diacritical emphasis attached to the human health aspects of existing enactments. Assistance or representation will be made available to committees or groups studying pesticide legislation. Support will be offered to local health units in developing ordinances to meet the needs within areas of their jurisdiction.

Training and Information: Organized courses in the public health aspects of pesticides will be offered, including practical epidemiology, toxicology, pesticide safety and waste disposal. In-service training courses will be conducted for the purpose of disseminating information to the local community and familiarizing workers in pest control operations with the occupational exposure hazards of pesticides. In addition to the various courses offered, films, slides, educational exhibits and various types of printed material will be made available to interested groups. Radio and TV spot announcements are available to local stations as public service announcements. In addition, the central office will maintain an information file on the commonly used pesticides in Arkansas.

Development of a Comprehensive Pesticide-Public Health Plan: Activities will be directed toward (1) creating public awareness of factual, pesticide-related, health hazards; (2) arousing cognizance within the medical and public health communities of the exigency for professional participation and communication; and (3) encouraging cooperation among health, agriculture, wildlife, and business interests to develop a mutually acceptable program that will benefit *all* the people of Arkansas.

Arkansas Poison Control Centers

City	*Name and Address*	*Telephone*
El Dorado	Poison Control Center Warner Brown Hospital 460 W. Oak. St. 71730 A. R. Clowney, M.D.	863-3656 Ext. 309
Fort Smith	Poison Control Center St. Edwards Mercy Hospital 1411 Roger Ave. 72901 James M. Post, Jr., M.D.	782-3071
	Poison Control Center Sparks Memorial Hospital 1311 Eye Street 72903 James M. Post, Jr., M.D.	782-2088
Harrison	Poison Control Center Boone County Hospital 620 N. Willow St. 72601 Joe Bill Wilson, M.D.	365-6141 Ext. 120
Helena	Poison Control Center Helena Hospital 72342 L. J. Pat Bell, M.D.	444-6411
Little Rock	Poison Control Center University of Ark. Medical Center 4301 W. Markham St. 72205 Jerry G. Jones, M.D.	664-5000
Osceola	Poison Control Center Osceola Memorial Hospital 601 Lee Ave., West 72370 L. D. Massey, M.D.	563-2611
Pine Bluff	Poison Control Center Jefferson Hospital 1515 W. 40th Ave. 71601 T. E. Townsend, M.D.	535-6800
Texarkana (Texas)	Poison Control Center Wadley Hospital 1000 Pine Street J. R. Bailes, M.D.	793-2111

EDITORIAL

Papillary Muscle Disease

Alfred Kahn, Jr., M.D.

The understanding of heart disease and the abnormal function resulting from the underlying disease is growing in geometric proportions. For example, an article devoted to papillary muscle disease prior to the past 10 years was virtually unheard of, although articles on valvular heart disease were commonplace. De Bush and Harrison (New England Journal Med., Vol. 281, p. 1458, Dec. 25, 1969) have published an article entitled "The Clinical Spectrum of Papillary Muscle Disease"; in reviewing their bibliography of 98 articles only 23 were written prior to 1960, thus stressing the recent explosion of knowledge in this area.

The authors correctly view disorders of the papillary muscle as having a spectrum varying from mild dysfunction to severe pathological disorders, which greatly impair cardiac performance; the most severe disorder is rupture of the papillary muscle, and they state that in a recent collection of operated cases, 75% left the hospital alive.

They have divided the patho-physiology of papillary muscle dysfunction into 3 categories: Distortion of normal spatiol relations as ventricular dilatation, ventricular aneurysm, carcinoid disease, etc; intrinsic papillary abnormalities including both morphologic disease as necrosis, fibrosis, etc., and functional abnormalities as hemorrhagic shock, left ventricular hypertrophy, etc.; lastly asynchronous papillary muscle and left ventricular contraction as in disordered ventricular contraction or extra systoles or electric conduction abnormalities. This chart is largely self explanatory.

The pathology of papillary muscles from coronary artery disease is variable and runs the gamut from scarring to rupture. Of particular interest is that papillary muscle dysfunction may exist without detectable histologic disease. Fibrosis is the most common pathologic finding in papillary muscle and it may be focal or diffuse. The authors point out papillary muscle ischemic changes may occur or be completely independent of changes in the adjacent ventricular wall, and due to the nature of the blood supply posterior infarction is said to frequently be associated with papillary muscle injury, but this is not the case in anterior infarction.

The diagnosis of papillary muscle disease by physical examination is largely the detection of a murmur—very often pan-systolic; there is often a 4th heart sound if there is acute mitral regurgitation. The EKG findings in papillary muscle disease are non-specific and may be totally absent.

Cardiac x-rays can often be helpful in papillary muscle dysfunction or rupture; pulmonary edema in the presence of a normal sized heart is found in papillary muscle disease after acute myocardial infarction. In chronic cases of mitral regurgitation the x-ray picture looks like rheumatic heart disease.

Cardiac catherization is described as being especially helpful in diagnosing papillary muscle disease, but it requires skill in the interpretation of the data. "The diagnosis of mitral regurgitation by catheterization depends on the presence of a prominent "V" wave in the pulmonary wedge or left atrial pressure tracings and in acute mitral insufficiency the heighth of the V wave is an approximate index of the severity of mitral regurgitation."

Left ventricular angiography is also very helpful in detecting papillary muscle disorders. Such things as abnormal ventricular contraction and ventricular wall thickness give clues of possible disease. Also looked for is enlargement of the left atrium, systolic regurgitation, the character of the regurgitatant jet, abnormal mobility of the

mitral valve leaflets, and the presence of centricular septal defects.

The authors have noted 3 different clinical courses in papillary muscle dysfunction; — 1. Abrupt onset of severe mitral regurgitation with or without signs of coronary artery disease leading to incapacitation within weeks or months. 2. Gradual onset of severe mitral regurgitation leading to incapacity within 1 to 3 years. 3. Mild mitral regurgitation associated with congestive heart leading to death by heart failure or myocardial infarction in 3 to 7 years. The worst sequqla in papillary muscle dysfunction due to coronary artery disease is congestive heart failure.

The clinical course in patient with papillary muscle rupture is death in 80% in two weeks. Long survival occasionally occurs.

The management of papillary muscle dysfunction has been unsatisfactory according to DeBusk and Harrison; they attribute this to poor ventricular function in a high percentage of patients. Patients with papillary muscle rupture who survive and then develop congestive heart failure probably warrant surgery but the authors indicate that it is hard to select patients who will survive due to the effects of the infarcted muscle wall as well as the hemodynamic alterations from the damaged valve.

Another excellent presentation on papillary muscle is a review by T. O. Cheng (American Journal of Medicine, Vol. 47, p. 924, Dec. 1969.) He published a prospective study on 80 patients, and stated that papillary muscle dysfunction may be the major cause of apical systolic murmurs in the middle aged population. Previously many physicians diagnosed apical systolic heart murmurs as rheumatic when the cause was papillary muscle dysfunction due to ischemia or infarction due to coronary artery disease. Cheng cites a review of 133 cases which were autopsied and in which if there was a myocardial infarction in 4 out of 5 hearts the papillary muscle was involved. Biochemical studies of papillary muscle have shown a deficit of nonepinephrine which condition might induce dysfunction with a circulatory failure to the muscle. The derivation of the blood supply for both the anterior and posterior muscles is dual; the circumflex artery supplies both muscles whereas the posterior also gets blood from the right coronary and the anterior muscle gets blood from the left. There are different types of systolic murmurs in papillary muscle dysfunction and the examining physician should be aware of this; diastolic murmurs are rarely heard and are usually due to other causes. Cheng states there is an association between ventricular aneurysm and papillary muscle dysfunction but the incidence is unknown.

DeBusk, Harrison and Cheng have presented excellent summaries of an uncommon aspect of coronary artery disease, namely papillary muscle disorders, a somewhat new area of knowledge in a previously intensively studied disease.

ANSWER—Electrocardiogram of the Month

RATE: 95 RHYTHM: Sinus
PR: .15 sec. QRS: .09 sec. QT: .38 sec.

SIGNIFICANT ABNORMALITIES:
Significant Q in II, III, aVF, c T inversions
Slight RS-T elevation III, aVF, c depression $V_{2,3}$

INTERPRETATION: Abnormal
Myocardial infarction, transmural, posterior, probably recent

ANSWER—Radiology Case of the Month

DIAGNOSIS:
Cretinism.

DISCUSSION:
The ossification centers of the femoral heads usually calcify by the end of the first year of life. In this child the epiphyses of the femoral heads show no ossification at two years.

In cretinism there is invariably a delay in the appearance of all the ossification centers. In this two year old child without calcification of the epiphyses of the femoral heads, the diagnosis of cretinism may be made with confidence.

Normal physical development should be attained with thyroid treatment, but mental retardation may persist.

REFERENCES:
Wietersen, F. K. and Bolow, R. M.: The Radiological Aspects of Thyroid Disease. Radiol. Clin. N. Am. 5:255, 1967.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

The Nixon Administration is drafting legislation that would eliminate the reason for physicians forming professional corporations for federal income tax advantages.

The legislation would remove the tax discrimination against self-employed physicians and other professionals in the tax treatment of retirement savings.

K. Martin Worthy, chief counsel of the Internal Revenue Service, said the legislation probably will be submitted to Congress next year as an Administration measure. He said the Administration intends to "remove the present discrimination between tax treatment of qualified plans for employees and qualified plans adopted by self-employed persons."

The IRS official said that it was unfortunate that disparate tax treatment of corporate employees and professionals has led to the adoption of state laws permitting the formation of professional corporations.

"The potential, if not actual, erosion of the traditional stringent professional standards and liabilities on the part of those who form such organizations is, in my opinion, a highly undesirable by-product of this problem and its resolution to date," he told a meeting of lawyers. "The intervention of a legal entity between the doctor, lawyer, or accountant and his client would not appear to serve any social or public purposes."

Worthy warned that recognition of a professional organization is recognized as a corporation for tax purposes did not necessarily mean that the organization and its employees would have a clear track as far as securing the tax benefits which are desired.

Worthy said an important consideration to be weighed by the professional person is that the new tax act provides for a 50 percent maximum tax rate, after a transition period, upon "earned income", which includes earnings from personal services.

"In view of this new tax ceiling, it is questionable whether a professional person would find it as important as it was previously to achieve the tax deferral available as an employee covered by a qualified pension or profit sharing plan," he said.

* * *

The Board on Medicine of the National Academy of Sciences urged wide use of three types of physician's assistants as the quickest way to relieve the national shortage of doctors.

In a special report, the board called for the cooperation of the American Medical Association, the Association of American Medical Colleges and the government in developing physicians' assistants programs.

The AMA has been advocating use of physicians' assistants for some time. Dr. Walter C. Bornemeier, president of the AMA, recently said:

"We of the AMA believe the shortage (of physicians) can be dramatically relieved if the physician divests himself of functions which can be performed by assistants or associates. That relief would be provided, not in ten years, but as fast as assistants could be trained—no major legislation, no huge appropriations of money are required. We are certain the plan will result in better care for more people at a lower unit cost. Much of the training given to the assistants is, and would be in future programs, on-the-job instruction in the doctor's office.

"There is nothing revolutionary about this plan. Until 50 years ago, American doctors trained by working in the offices of established physicians. And even with the rise of university-affiliated medical colleges, we doctors continued to train the bulk of our non-professional nurses and office technicians."

The NAS board said that physicians' assistants could "extend the arms, legs and brains of the physician" by performing tasks that do not require the unique talents of the physician.

The three types of assistants recommended by the board were:

1) Physician's associate—the most highly trained type; would be qualified to do work that involves some independent medical judgment; under the physician's supervision, he could in some cases make a diagnosis and perform therapy, with the range of his responsibilities increasing as he develops new skills on the job.

2) Specialized assistant—would be highly skilled in one type of clinical specialty or procedure within a specialty (such as the operation of a renal dialysis unit); would receive most of his training from a physician specialist.

3) Non-specialized assistant—would be to medicine what the practical nurse is to nursing; could receive much of his training on the job.

As the AMA has been doing, the board cautioned against the premature enactment of licensing laws that would establish rigid job qualifications before the full potential usefulness of the assistants had been determined. The board report recommended a system of registration that would permit physicians to employ assistants who had completed an approved program or otherwise established their qualifications.

Possession of a high school diploma should be an adequate prerequisite for training to become physician's assistants, according to the NAS Board. It suggested varying amounts of education, clinical experience, and on-the-job training for the three types of assistants. For physician's associates, it recommended the equivalent of two years of professional-level classroom and clinical work. Instruction should cover the basic sciences underlying medical practice, and clinical training should be "of essentially the same type and degree as that given medical students." Medical corpsmen, about 30,000 of whom are discharged from the military services each year, and other medical workers who enter the training program should be allowed credit for the clinical knowledge they already have acquired.

* * *

The American Medical Association opposed establishment of a national formulary that could restrict the prescribing practices of physicians with respect to federally supported medical programs.

In a letter of Sen. Russell B. Long (D., La.), chairman of the Senate Finance Committee, which was considering such legislation, Dr. Ernest B. Howard, executive vice president of the AMA, said:

"The American Medical Association, representing approximately 180,000 active private practitioners of medicine in America, is opposed to a proposal that would interfere with the professional judgment and responsibilities of physicians. The proposed amendment, which would give a Federal Formulary Committee the authority to *exclude* from the Formulary (and therefore from payment) any drug which it considers unnecessary is, in our opinion, just such an infringement upon the professional judgment of practicing physicians.

"The amendment would provide the Formulary Committee with authority to publish prescribing information about each drug listed. Adequate prescribing information to assist physicians in selecting the most rational course of therapy is available through a variety of acceptable sources. The proposed additional information is not only unnecessary but undesirable since physicians would be unable to deviate from that standard regardless of a particular patient's circumstances without facing the risk of malpractice liability.

"Further, the amendment would require that a physician who desires to prescribe the product of a particular manufacturer with which he had experience and confidence could do so only by writing in his own handwriting the established name of the drug again and the name of the preferred manufacturer. We disagree with this practice limiting the authority of the physician to prescribe the drug of his choice. Our governing body, the AMA House of Delegates, has stated and reaffirmed on many occasions that physicians should be free to use either the generic (established) or brand name in writing prescriptions.

"In addition, the proposed amendment would have the Formulary Committee institute inspections, sample examinations and scientific review of drug products to be listed by the name of the supplier or the brand name. This task of the committee seems to be beyond its capability, particularly since it is constituted only on a part-time basis . . .

"We have said many times that we want our patients to receive high-quality drugs at the lowest possible cost. We continue in this position, more strongly than ever. But, we firmly believe that the creation of a national formulary would not bring about a more economical provision of

drugs under programs established within the Department of Health, Education, and Welfare, nor would it enhance the quality of these drugs."

* * *

The American Medical Association supported a senate-approved bill that would expand federal family planning services and population research activities.

In a statement submitted to the House Subcommittee on Public Health and Welfare, the AMA said it believes the establishment of an Office of Population Affairs under a deputy assistant secretary in the Department of Health, Education, and Welfare is highly desirable. The Office would make formula or special project grants relating to population and family planning; administer population and family planning research; act as a clearing house on domestic and international population family planning programs; provide liaison with other federal agencies; and support training for manpower in these programs.

The bill (S. 2108) also would authorize special projects for family planning services, formula grants for family planning, training and research grants, and grants for the construction and operation of population research centers.

The AMA said that there is an urgent need for a greatly expanded program of population research, as authorized by the legislation.

"If the worldwide population increase is to be controlled," the AMA said, "it will require more scientific knowledge of human behavior. We need more research on reproductive physiology, more demographic research, and more attitudinal and motivational research."

The AMA listed a number of obstacles to be overcome if a national program for population control is to be effective: education, religion, legal and economic considerations.

"The most formidable of these is lack of education," the AMA statement said. "Population control is only attainable when people first understand the nature of their own bodies."

Meantime, the Defense Department disclosed that a series of rulings this year had made it mandatory that U.S. military base hospitals throughout the world perform abortions and surgical sterilizations for armed forces personnel and their dependents regardless of state and local laws.

Dr. Louis M. Rousselot, assistant secretary of defense for health and environment, issued the rulings to clarify a policy that had been effective since 1966 but which some bases had not been following.

* * *

Five Republican senators introduced legislation that would establish a four-year federal program of family physician scholarships and fellowships to medical students and graduates who agree to practice in physician-shortage areas or to serve migratory agricultural workers.

For the first year, about 500 scholarships not to exceed $5,000 and 200 fellowships would be offered at a cost of $4.5 billion. The program would be expanded each year until by the fourth year 1,000 scholarships and 500 fellowships would be authorized for students and graduates agreeing to practice in isolated rural areas, migrant areas, city ghettos and Indian reservations with a shortage of physicians.

For each year of a scholarship, one year of service would be required. No additional service would be required under the fellowship part of the program.

Sen. George W. Murphy (R.,Calif.) was chief sponsor of the legislation (S. 4208). Cosponsors were Sens. Peter H. Dominick (R.,Colo.), Jacob K. Javits (R.,N.Y.), Winston L. Prouty (R.,Vt.) and William B. Saxbe (R.,Ohio).

THINGS TO COME

Arkansas-Oklahoma Cancer Forum Dates Set

March 12-13, 1971, have been set as the dates for the 1971 Arkansas-Oklahoma Cancer Forum. The two-day seminar will be held at beautiful Fountainhead Lodge located at Lake Eufaula in Oklahoma. Complete program details will be included in subsequent issues of the Journal.

PERSONAL AND NEWS ITEMS

Doctor Balch Associates

Dr. James I. Balch is now associated with Dr. Porter R. Rodgers, Jr., in the practice of general, thoracic and peripheral vascular surgery at 403 East Lincoln Avenue in Searcy.

Dr. Downs Elected to Board

Dr. Ralph A. Downs of Little Rock was elected to the Board of Directors, South Central Section, American Urological Association, during their annual meeting October 4-7 in Dallas. Dr. Downs now serves as Arkansas' representative on the organization's executive committee.

Dr. Workman Addresses Osceola Youth

"Alcoholism: Causes and Cures" was the subject of a speech made by Dr. Wayne Workman of Blytheville to Osceola High School students in an assembly program held earlier this fall.

Baxter County Medical Society Sponsors Seminars

Members of the Baxter County Medical Society voted recently to sponsor a program of continuing psychiatric seminars to be presented in Mountain Home on a monthly basis by a team from the University of Arkansas Medical Center.

Dr. Carl Arnold, society president, was in charge of the meeting which heard reports from Dr. William R. Snow of Mountain Home on that area's "Stroke Project" and also from Dr. Charles Silverblatt, coordinator of the Arkansas Regional Medical Program.

Dr. Saltzman Awards Luncheon Speaker

Dr. Ben N. Saltzman, Mountain Home, was the speaker at the 1970 Awards Luncheon of the Pulaski County Unit of the American Cancer Society held in September. Dr. Saltzman is president-elect of the Arkansas Division of the American Cancer Society.

Open House Held at New Medical Clinic

Open house was held at the new Bentonville Medical Clinic, which houses the offices of Drs. John A. Rollow and Donald L. Cohagan, in late September. The clinic is located on Highway 71 North, Bentonville.

Jacksonville Physicians Approve Guidelines for Clinic

Jacksonville's seven practicing physicians unanimously approved guidelines they hope will be followed if plans for the establishment of an indigent medical clinic there become a reality. According to City Health Officer, Dr. Albert Johnson, local physicians support the clinic's establishment.

Postgraduate Coronary Care Course Attended

Dr. Billy B. Livingston, Camden, and Dr. Thomas H. Wortham, Jacksonville, were among physicians attending a postgraduate course in coronary care at the University of Arkansas Medical Center in August.

Burglary Reported

The residence of Dr. John Smith of Little Rock was ransacked by thieves recently. The burglars made off with several personal items of value.

Plasma Zinc Levels in Health and Disease

J. A. Halstead (VA Hosp, Washington, DC) and J. C. Smith, Jr.

Lancet 1:322-324 (Feb 14) 1970

Plasma zinc levels were measured by atomic absorption spectrophotometry in healthy adults and children, in patients with a variety of diseases, in pregnancy, and in women taking oral contraceptives. The level was 96μg/100 ml for healthy adults and 89μg/100 ml for healthy children. The concentration was consistant, with no significant variation attributable to sex, food consumption, or diurnal variation. Abnormally low values were obtained in alcoholic cirrhosis, other types of liver disease, active tuberculosis, indolent ulcers, uremia, before and after a single hemodialysis, myocardial infarct, nontuberculous pulmonary infection, Down's syndrome, cystic fibrosis with growth retardation, growth-retarded Iranian villagers, pregnancy, and in woman taking oral contraceptives. In cystic fibrosis without growth retardation and in inactive tuberculosis there was no significant decrease. No conditions have been observed with higher than normal plasma-zinc concentration.

OBITUARY

Rufus Benjamin Robins

Rufus Benjamin Robins, M.D., died September 20, 1970, at the age of 71. He was a native of Ozan, Arkansas.

Dr. Robins received his medical degree from the University of Chicago School of Medicine in 1925, and, from that year until 1964, he practiced in Camden. From 1964 until his death, he resided in Chicago, Illinois, where he was assistant administrator for the Norwegian-American Hospital located there.

Dr. Robins served as president, Arkansas Medical Society (1942-43); president, Ouachita County Medical Society; vice-president, American Medical Association; president, American Academy of General Practice (1952-53). He was also a Fellow of the American College of Surgeons.

He is survived by his wife, Edna Gann Robins; one daughter, a stepson, and seven grandsons.

* * *

Fay Beeson Millwee

Fay Beeson Millwee, M.D., died September 29, 1970, at the age of 50. Born in Horatio, he had lived and practiced medicine in McCrory since 1952.

Dr. Millwee was graduated from Arkansas Polytechnical College in Russellville and, subsequently, from the University of Arkansas School of Medicine, class of 1948.

He was a member of the Woodruff County and Arkansas Medical Societies and a Fellow of the American Society of Abdominal Surgeons. Dr. Millwee was a veteran of both World War II and Korea.

He is survived by his wife, Mrs. F. B. Millwee; a son, two daughters, and four grandchildren.

LETTERS TO THE EDITOR

Dear Dr. Kahn:

I have just finished the excellent article concerning the cleft palate child, written by Mr. John Walton and which appeared in the Journal, September 1970, Volume 67, No. 4.

Mr. Walton failed to mention that there is a Cleft Palate Clinic functioning in Arkansas at the Arkansas Children's Hospital in Little Rock and that this facility has been going for over five years. The clinic is going very well and is, at the moment, mainly sponsored by the Crippled Children's Division of the Arkansas State Department of Welfare.

I thought you might want to put this in the Journal so that readers of the Journal who are interested in the situation here in Arkansas would know that there is a local facility with a very good reputation. That clinic does offer all necessary diagnostic and therapeutic services. The clinic director at the moment is Robert DeBin, D.D.S.

Sincerely,

Harry Hayes, Jr., M.D.

Lithium Carbonate and Sleep in Affective Illness

D. J. Kupfer et al (Yale Univ School of Medicine, New Haven, Conn)
Arch Gen Psychiat 23:35-40 (July) 1970

The effect of lithium carbonate therapy on sleep was studied in seven patients with a manic-depressive or depressive illness. Drug administration had significant effects on the sleep pattern, especially on REM and delta sleep. REM sleep time, as well as the phasic REM elements, was reduced by lithium carbonate. Partial to complete reversal of the REM suppression occurred in the two patients whose drug was either reduced or discontinued. Delta sleep time was elevated on lithium carbonate.

TUBERCULOSIS ABSTRACTS

Sponsored by Arkansas Tuberculosis and Respiratory Disease Association

SKELETAL TUBERCULOSIS

Skeletal tuberculosis occurs in approximately one percent of patients with tuberculosis. Even if diagnosis is made after skeletal TB is moderately advanced, good joint function oftentimes can be expected from drug treatment alone.

Like pulmonary tuberculosis, skeletal tuberculosis has markedly decreased. In fact, it has become so uncommon that clinicians have become unaccustomed to think about it, even in patients with a previous history of tuberculosis or exposure to it.

Oftentimes diagnosis is delayed for many years. This is unfortunate since it leads to intractable bone and joint damage resulting in a marked loss of function. Therefore, a review of skeletal tuberculosis appears to be in order.

Due largely to modern effective chemotherapy, skeletal TB has been practically eliminated in children. So the discussion which follows deals primarily with adult disease.

CAUSES OF SKELETAL TB

Most skeletal TB probably results from the blood transport of tubercle bacilli from a focus of tuberculosis in an area or organ such as the lung, early in the course of the initial infection. In some instances, though, the bacilli may be transported through the lymphatic system. One study suggests that most Pott's disease results from lymphatic dissemination of bacilli to the spine. Skeletal involvement may be the only manifestation of systemic disease.

The basic lesion is almost always a combination of osteomyelitis and arthritis. Invasion of the joint space may be either direct via the blood stream or indirect from lesions in epiphyseal bone eroding into the joint space.

Initially an inflammatory reaction develops in the synovium which, in turn, provokes granulation tissue. An effusion develops in which fibrin may precipitate, forming the so-called "rice" bodies. This pannus of granulation tissue then begins to erode and destroy cartilage and eventually cancellous bone. Ultimately, it leads to progressive demineralization and caseation necrosis.

TB infection does not produce the proteolytic enzymes which destroy cartilage so extensively and so abruptly in pyogenic arthritis. In skeletal TB, cartilage is destroyed peripherally at first. Joint space may be preserved for a considerable time.

In far advanced disease, para-osseous abscesses (the so-called "cold" abscesses) usually develop eventually, and these abscesses involve joint tissue.

Ultimately erosion with sinus-tract formation may develop.

The healing process in bone and lung are similar. Fibrous tissue forms; usually it causes fibrous and possibly osseous ankylosis.

CLINICAL ASPECTS

In adults skeletal TB usually occurs in the joints most subject to trauma. One study of 230 cases revealed that over 70% of the lesions occurred in the spinal column, hip, knee, or sacroiliac joints.

However, any bone in the body can be involved. For instance, TB of the ribs occurs in approximately 5% of all cases of bone and joint TB. In fact, it is the most common inflammatory process involving the ribs. In older patients it may be seen in unusual locations, such as sternoclavicular joints.

Any monoarticular arthritis, particularly with a destructive lesion, is suspect. Patients with multiple osteolytic lesions should always alert the clinician to possible multiple skeletal involvement or even widespread dissemination of TB in the bone.

EARLY DIAGNOSIS

If skeletal TB is properly diagnosed and treated early enough, good joint function will result.

TB should always be considered in patients who complain of skeletal pain, as pain is the most

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Paul T. Davidson, M.D., Isaac Horowitz, M.D. *The American Journal of Medicine,* January, 1970, Vol. 48.

common complaint. There may be joint swelling and limitation of motion. A "cold" abscess is another clue.

The purified protein derivative tuberculin skin test remains one of the most valuable diagnostic tools and should be a routine part of the evaluation of any destructive arthritis or bone lesion, particularly spinal or monoarticular arthritis.

Recovery of bacilli in smear and culture of joint fluid or "cold" abscess aspirates confirms diagnosis. If necessary, a biopsy specimen of tissue should be obtained for examination and culture, preferably at an early date. A pathology report of granulation tissue with caseation necrosis compatible with tuberculosis is sufficient indication to begin therapy.

Good roentgenograms are invaluable in helping to establish the diagnosis and to follow the progress of the disease during therapy. Early lesions are easily missed since soft tissue swelling may be the only abnormality. Later, in long bones, small localized areas of osteoporosis occur subchondrally, often associated with a surrounding ring of sclerosis. Subsequently, varying degrees of cortical and cartilage destruction take place which in months or years can result in complete destruction of the joint space.

Changes in the spine are first noted as a slight narrowing of the intervertebral space. Later the adjacent vertebral bodies develop destructive lesions with eventual collapse and formation of varying degrees of scoliosis and kyphosis often referred to as gibbus formation.

The differential diagnosis of skeletal tuberculosis should include sarcoid arthritis and pyogenic arthritis caused by bacteria and fungi.

The so-called "atypical" mycobacterial infections have been implicated as causes of bone and joint disease in a number of reports. Clinically there is little to differentiate this infection from TB, although a case simulating rheumatoid arthritis has been reported. Atypical mycobacteria are frequently resistant to the usual antituberculosis drugs.

Neoplasms in bone can mimic tuberculosis. Often such lesions are metastatic from tumors of the breast, lung, or prostate. Finding the primary lesion helps to establish the etiology of the bone lesion. Since bone lesions caused by tumor are much more common than tuberculosis, the latter diagnosis is more likely to be overlooked, resulting in unnecessary delay and risk in treating a completely curable disease.

TREATMENT

Since the advent of chemotherapy, surgery is much less often necessary and much safer than before. Skeletal tuberculosis of the spine when associated with considerable destruction warrants surgical fusion because of the chance of collapse with paraplegia.

With effective chemotherapy, however, surgical intervention is only rarely indicated and should be reserved to prevent deformity, to improve function, and to arrest disease that has not responded to drugs. If diagnosis is made when the disease is in its early stages or even when it is moderately advanced, good joint function can be expected to result with drug treatment alone.

Operative Factors Influencing Mortality in Intracranial Aneurysm Surgery

R. L. Paul and J. G. Arnold, Jr. (Univ of Maryland Hosp, Baltimore)

J Neurosurg 32:289-294 (March) 1970

The general mortality rates in this series of intracranial aneurysm surgery were 37.6% for all cases and 27.5% for good-risk cases. These figures are in general agreement with those given by the "Report on the Cooperative Study of Intracranial Aneurysms and Subarachnoid Hemorrhage." Analysis of the operative data revealed that rupture of the aneurysm at surgery occurred in 50% of cases and was frequently followed by operative occlusion of a major intracranial vessel. The mortality rate subsequent to these events, even in good-risk patients, was forbidding (61%) contrasted to 6.4% mortality rate in those not complicated by these factors. The latter mortality figure is comparable to the low mortality reported by some centers in recent years and indicates that low acceptable mortality rates can be achieved generally if these preventable operative hazards are avoided.

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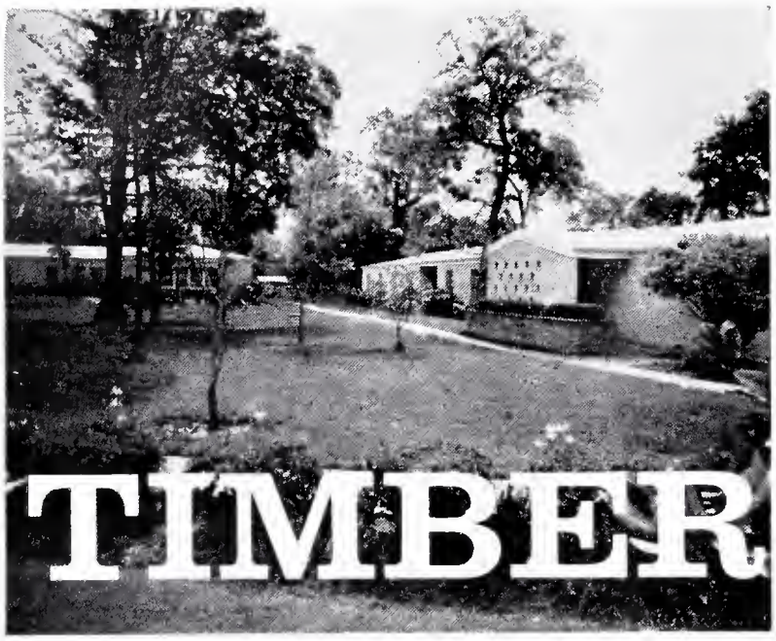

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Buirge, Raymond E. P. O. Box 519, Mountain Home 72653 (Res.) 425-2456
Cheney, Maxwell G. 353 East 8th, Mountain Home 72653, 425-3125
Davis, James H. Salem Clinic, Salem 72576, B95-32B1
Ducker, David E. Salem Clinic, Salem 72576, B95-32B1
Dunbar, James C. 617 South Baker, Mountain Home 72653, 425-2020
Grasse, A. Meryl Calico Rock 72519, 297-3726
Grasse, John M., Jr. Topeka, Kansas
Gray, Elisha M. 212 West 6th, Mountain Home 72653, (Res.) NF
Guenthner, John F. 126 West 6th, Mountain Home 72653, 425-3131
Hildebrand, Eugene Route 3, Mountain Home 72653 (Res.) 491-5240
Kerr, Robert L. 353 East 8th, Mountain Home 72653, 425-3125
Kinder, Doyle O. 353 East 8th, Mountain Home 72653, 425-3125
Marvel, Wiley R. Bull Shoals Medical Clinic, Bull Shoals 72619, 445-24B1
Saltzman, Ben N. 126 West 6th, Mountain Home 72653, 425-3131
Sneed, John W., Jr. 613 South Street, Mountain Home 72653, 425-5232
Snow, William R. 353 East 8th, Mountain Home 72653, 425-3125
Tucker, Charles L. Ash Flat Clinic, Ash Flat 72513, 994-7301
Wilson, Jack C. 353 East 8th, Mountain Home 72653, 425-3125

BENTON COUNTY

Casebeer, Robert L. P. O. Box 159, Rogers 72756, 636-3220
Clower, John D. P. O. Box 737, Rogers 72756, 636-2711
Cohagan, Donald L. P. O. Box 66, Bentonville 72712, 273-5543
Compton, Neil E. P. O. Box 209, Bentonville 72712, 273-5413
Garrett, John L. Gravette Medical Center, Gravette 72736, 7B7-2931
Gunter, Cal D. 218 South Wright, Siloam Springs 72761 (Res.) 524-5B53
Hall, Billy V. South First Street, Gravette 72736, 7B7-2931
Huskins, James D. 304 South Maxwell, Siloam Springs 72761, 524-3141
Jackson, James L. 309 South Main, Bentonville 72712 (Res.) 273-2173
Jennings, W. E. P. O. Box 737, Rogers 72756, 636-2711
Knapp, James R. Washington General Hospital, Fayetteville 72701, 442-B211
McCollum, Edward N. P. O. Box 96, Decatur 72722, 752-3233
Martin, John R. (Jack) 304 South Maxwell, Siloam Springs 72761, 524-3141
Moose, John I. 304 South Maxwell, Siloam Springs 72761, 524-3141
Pickens, James L. P. O. Drawer 12B, Rogers 72756, 636-3220
Puckett, Billy J. 304 South Maxwell, Siloam Springs 72761, 524-3141
Rollow, John A. Bentonville Medical Clinic, Bentonville 72712, 273-2497
Stinnett, Charles H. 304 South Maxwell, Siloam Springs 72761, 524-3141
Warren, Grier D. 1040 West Walnut, Rogers 72756, 636-2711
Weaver, Donald D. P. O. Box B, Gentry 72734, 736-2213
Weaver, Robert H. P. O. Box B, Gentry 72734, 736-2213
White, Harry M. P. O. Box 737, Rogers 72756, 636-2711
Wilson, Stewart M. P. O. Box 737, Rogers 72756, 636-2711

BOONE COUNTY

Bell, Thomas E. 604 North Spring, Harrison 72601, 365-641B
Bennett, Joe D. 651 North Spring, Harrison 72601, 365-9667
*Breit, William H. Harrison
Fowler, Ross E. 215 West Stephenson, Harrison 72601, 365-B651
Gladden, Jean C. 651 North Spring, Harrison 72601, 365-B275
Hammon, Albert R. Park and Circle Drive, Harrison 72601 (Res.) 365-3746
Hudson, William A. Jasper 72641 (Res.) 446-294B
Jackson, Ulys 118 South Pine, Harrison 72601, 365-5333
Kelley, Lawrence A. P. O. Box 157, Yellville 72687, 449-6414
Kinman, Lindell M. P. O. Box 404, Harrison 72601, 365-3939
Kirby, Henry V. 216 North Walnut, Harrison 72601, 365-5022
Langston, Robert H. 520 North Spring, Harrison 72601, 365-B2B6
McCoy, Orville B. P. O. Box 57B, Harrison 72601, 365-3592
Mahoney, Paul L., Jr. 651 North Spring, Harrison 72601, 365-2441
Maris, Mahlon O. 651 North Spring, Harrison 72601, 365-B147
Martin, J. David P. O. Box 1095, Harrison 72601, 365-9414
Owens, D. L. 113 East Rush, Harrison 72601 (Res.) 365-3262
Robinson G. Allen 707 North Vine, Harrison 72601, 365-2763
Russell, David M. 707 North Willow, Harrison 72601, 365-B155
Siler, Kenneth A. 651 North Spring, Harrison 72601, 365-5570
Smith, Van P. O. Box 1077, Harrison 72601, 365-3459
Svendsen, Fred J. P. O. Box 156, Yellville 72687, 449-6311
Wallace, Oliver Green Forest 72638, 43B-521B
Williams, Rhys A. 651 North Spring, Harrison 72601, 365-B275
Wilson, Joe B. 520 North Spring, Harrison 72601, 365-B2B6

BRADLEY COUNTY

Crow, Merl T. 203 East Church, Warren 71671, 226-5B11
Marsh, James W. 302 North Main, Warren 71671, 226-2112
Miles, Dallas D. 202 West Cypress, Warren 71671, 226-5237
Whaley, William C., Jr. 203 East Church, Warren 71671, 226-5B11
Wynne, George F. 113 West Cypress, Warren 71671, 226-2B44

CHICOT COUNTY

Burge, John H. 434 South Cokley, Lake Village 71653, 265-2255
Burge, John P. 434 South Cokley, Lake Village 71653, 265-2255
Johnston, Gaither C. 4301 West Markham, Little Rock 72205, 664-5000
Smith, Major E. 101 West Peddicord, Dermott 7163B, 53B-5717
Talbot, Allen G. 434 South Cokley, Lake Village, 71653, 265-2255
Thomas, H. W. 105 North Freeman, Dermott 7163B, 53B-5255
Thomas, Wallace A. 114 Gayle St., Sumter, South Carolina 29150 (Res.)
*Thompson, John A. Dermott
Weaver, William J. P. O. Box Q, Eudora 71640, 355-4376
Wilson, Thomas C. 117 East Peddicord, Dermott 7163B, 53B-5253

CLARK COUNTY

Anderson, P. R. 416 Main, Arkadelphia 71923, 246-2431
Balay, John W. 416 Main, Arkadelphia 71923, 246-2431
Blackmon, James T. 100B Pine, Arkadelphia 71923, 246-6734
Clark, Charles G. 130 North 7th, Arkadelphia 71923, 246-4051
Gary, Eli 6th and Pine, Arkadelphia 71923, 246-2491
Kennedy, Jack W. (President) 4B15 West Markham, Little Rock 72205, 661-2147
Luck, Herman D. 90B Main, Arkadelphia 71923, 246-2471
Nunnally, Robert H. 107 North 3rd, Gurdon 71743, 353-2501
Peeples, George R. 305 East Main, Gurdon 71743, 353-4422
Reid, Joe W. 61B Caddo, Arkadelphia 71923, 246-2861
Ross, W. A. 408 Clay, Arkadelphia 71923, 246-2201
Stevens, David G. Clark County Memorial Hospital, Arkadelphia 71923, 246-2441
Thompson, Albert W. Shreveport, Louisiana
Toombs, Vernon L. P. O. Box 799, Arkadelphia 71923, 246-5B51

CLEBURNE COUNTY

Baldridge, Max P. O. Box 431, Heber Springs 72543, 362-3479
Barnett, James C. 4th and Spring, Heber Springs 72543, 362-3143
Barnett, Michael E. 4th and Spring, Heber Springs 72543, 362-3143
Hinkle, Richard A. P. O. Box 12B, Quitman 72131, 5B9-2600
McClanahan, Donald H. 4th and Searcy Street, Heber Springs 72543, 362-2414
Poff, Nathan L. 4th and Searcy Street, Heber Springs 72543, 362-2414
Sharp, Jack V. 301 West Searcy, Heber Springs 72543, 362-3316
Smith, Wallace W. 109 West Main, Heber Springs 72543, 362-21B6
Wells, William M. 4th and Spring, Heber Springs 72543, 362-3143

COLUMBIA COUNTY

Alexander, John E. 707 North Washington, Magnolia 71753, 234-22BB
Baldwin, Ronald L. 110 West North, Magnolia 71753, 234-4411
Carrington, H. K. 720 North Washington, Magnolia 71753, (Res.) 234-4157
Farmer, John M. 104 East Columbia, Magnolia 71753, 234-2230
Grimmett, Byron Highway 19 North, Waldo 71770, 693-5B37
*Houston, Evan G. Magnolia
Jones, Thomas H. Waldo 71770, 693-5634
Kelley, Charles W. 105 West North, Magnolia 71753, 234-5544
McMahen, Hugh S. P. O. Box 647, Magnolia 71753, 234-3340
Ruff, John L. 104 Hospital Road, Magnolia 71753, 234-2144
Rushton, Joe F. 219 North Washington, Magnolia 71753, 234-116B
Sizemore, Paul 123 North Jackson, Magnolia 71753, 234-3040
Walker, Jack T. 123 North Jackson, Magnolia 71753, 234-3040
Weber, Charles H. 110 West North, Magnolia 71753, 234-4411
Weber, Charles L. 110 West North, Magnolia 71753, 234-4411
Wilson, John H. 123 North Jackson, Magnolia 71753, 234-3040

CONWAY COUNTY

Evans, Clifford L. 200 South Moose, Morrilton 72110, 354-2456
Hickey, Thomas H. 1109 East Broadway, Morrilton 72110, 354-4623
Magie, Jimmie J. 1504 Caldwell, Conway 72032, 327-4444
Owens, Gastor B. 601 South Moose, Morrilton 72110, 354-4505
Siddon, William H. 601 South Moose, Morrilton 72110, 354-5555
Wells, Charles F. 601 South Moose, Morrilton 72110, 354-2123
White, Henry B. 1109 East Broadway, Morrilton 72110, 354-4623
Williams, C. Ray 6 Riviera Circle, Little Rock 72205 (Res.) 663-3621

CRAIGHEAD-POINSETT COUNTY

Alston, Herman D. 816 Cobb Street, Jonesboro 72401, 932-4570
Baker, Glen F. 411 East Matthews, Jonesboro 72401, 932-7430
Barnett, Horace C. 114 East Oak, Jonesboro 72401, 935-5513
Bell, William K. 517 West Jefferson, Jonesboro 72401 (Res.) 932-9113
Berry, Donald M. 417 East Matthews, Jonesboro 72401, 935-3990
Blanton, Martin E. 808 South Church, Jonesboro 72401, 932-B433
Bogaev, Leonard R. 812 Cobb, Jonesboro 72401, 932-2926
Burns, Richard G. 505 East Matthews, Jonesboro 72401, 932-119B

Caffery, Eldon L. ..... 812 Cobb, Jonesboro 72401, 932-2926
Clopton, Owen H., Jr. ..... P. O. Box 1326, Jonesboro 72401, 932-1198
Cooper, Edward M. .... St. Bernard's Hospital, Jonesboro 72401, 932-7458
Craig, Gus A. ..... 920 Union, Jonesboro 72401, 932-3022
Eddington, William R. ..... University Center, Jonesboro 72401, 935-8132
Faris, John C. ..... 907 Union, Jonesboro 72401, 935-8470
Forestiere, A. J. ..... P. O. Box 106, Harrisburg 72432, 578-5443
Garner, William L. ..... Memphis, Tennessee
Gray, John T. ..... 905 Union, Jonesboro 72401, 932-6246
Hogue, Ernest L. ..... 311 East Matthews, Jonesboro 72401, 932-8323
Jones, John K. ..... 129 Greenwood Avenue, Lepanto 72354, 475-2561
Keisker, Henry W., Jr. ..... 804 Jeter Drive, Jonesboro 72401, 932-4581
Kemp, Charles E. ..... 809 Cobb, Jonesboro 72401, 935-6012
Kirkley, John B. ..... 810 Jeter Drive, Jonesboro 72401, 932-6609
Ledbetter, Joseph W. ..... 804 South Church, Jonesboro 72401, 935-5454
McCurry, John H. ..... St. Louis, Missouri
McKee, Bobby E. ..... 505 East Matthews, Jonesboro 72401, 935-6396
Mahon, Larry E. ..... 924 South Main, Jonesboro 72401, 935-9123
Mayfield, James R. ..... 832 Cobb, Jonesboro 72401, 932-4211
Mitchell, George E. ..... 832 Cobb, Jonesboro 72401, 932-4211
Modelevsky, Aaron C. ..... 1004 Wall, Jonesboro 72401, 932-3681
Munos, Louis R. ..... 224 East Matthews, Jonesboro 72401, 932-7451
Neblett, Donald T. ..... 809 Cobb, Jonesboro 72401, 935-6012
Oates, Franklin T. ..... Lepanto 72354, 475-2327
Peeler, Malcolm O. ..... Southgate Plaza, Jonesboro 72401, 935-8510
Plunk, Hermie G. ..... 202 East Main, Jonesboro 72401, 932-1181
Poff, Joseph H. ..... 118 East Main, Trumann 72472, 483-7611
Poole, Grover D. ..... 605 Southwest Drive, Jonesboro 72401, 932-2634
Puckett, John P., Jr. ..... P. O. Box 1178, Jonesboro 72401, 935-3990
Raney, Bascom P. ..... 403 East Matthews, Jonesboro 72401, 935-5529
Robinette, James M. ..... 907 Union, Jonesboro 72401, 932-2423
Rogers, James F. ..... 806 Jeter Drive, Jonesboro 72401, 935-4755
Shanlever, Rufus C. ..... 1103 Wilkins, Jonesboro 72401, 932-2450
Shepherd, W. F. ..... 505 East Matthews, Jonesboro 72401, 932-8121
Smith, Floyd A., Jr. ..... 415 West Main, Trumann 72472, 483-7626
Smith, Vestal 8. ..... P. O. Box 614, Marked Tree 72365, 358-2811
Smoot, John D. ..... 224 East Matthews, Jonesboro 72401, 932-7458
Sparks, E. Barrett ..... 832 Cobb, Jonesboro 72401, 932-4211
St. Clair, John T. ..... 810 Jeter Drive, Jonesboro 72401, 932-6609
Stroud, Paul T. ..... P. O. Box 818, Jonesboro 72401, 932-8323
Swingle, Charles G. ..... 105 Nathan, Marked Tree 72365, 358-2036
Utley, Phillip M. ..... 920 South Main, Jonesboro 72401, 932-8221
Verser, Joe ..... P. O. 8ox 106, Harrisburg 72432, 578-5443
Vollman, Don B., Jr. ..... 411 East Matthews, Jonesboro 72401, 932-7430
Webb, James W. ..... 920 South Main, Jonesboro 72401, 932-8221
Wilson, Francis M. ..... 806 Jeter Drive, Jonesboro 72401, 932-1987
Wisdom, Durwood ..... 505 East Matthews, Jonesboro 72401, 932-8121

CRAWFORD COUNTY

Edds, Millard C. ..... 1103 Chestnut, Van Buren 72956, 474-2361
Ferrell, Griffith H., Jr. ..... 2226 Alma Highway, Van 8uren 72956, 474-9535
Hopkins, Ed G. ..... 1103 Chestnut, Van 8uren 72956, 474-2361
Savery, Harry W. ..... 618½ Main, Van Buren 72956, 474-2131
Shearer, F. E. ..... Route 2, Alma 72921, 474-9539
Thicksten, Jack N. ..... 164 Fayetteville, Alma 72921, 632-2117

CRITTENDEN COUNTY

Deneke, Milton D. ..... 300 South Rhodes, West Memphis 72301, 735-1170
Ferguson, T. Murray ..... 200 South Rhodes, West Memphis 72301, 735-2150
Ford, Robert C., Jr. ..... 200 South Rhodes, West Memphis 72301, 735-2150
Hamilton, Ralph B. ..... 300 South Rhodes, West Memphis 72301, 735-1170
Hodges, William B. ..... 300 South Rhodes, West Memphis 72301, 735-1170
Jay, Gilbert D., III ..... 200 South Rhodes, West Memphis 72301, 735-4610
Kennedy, Keith B. ..... 316 Tyler, West Memphis 72301, 735-7680
Lanford, H. G. ..... 308 South Rhodes, West Memphis 72301, 735-3664
Lubin, Milton ..... 200 South Rhodes, West Memphis 72301, 735-3919
Peeples, Chester W., Jr. ..... 300 S. Rhodes, West Memphis 72301, 735-1170
Pontius, David H., Jr. ..... 300 South Rhodes, West Memphis 72301, 735-1170
Schoettle, Glenn P. ..... 308 South Rhodes, West Memphis 72301, 735-3664
Smith, 8edford W. ..... 300 South Rhodes, West Memphis 72301, 735-1170
Taylor, C. Herbert, Jr. ..... 200 S. Rhodes, West Memphis 72301, 735-4610
Thompson, Donald F. ..... 200 South Rhodes, West Memphis 72301, 735-4610
Wilson, John M. ..... Memphis, Tennessee
Winters, W. Lee ..... 1605 2nd Street, Earle 72331, 792-8956
Wright, William J. ..... P. O. Box 608, Earle 72331, 792-8956

CROSS COUNTY

8eaton, Kenneth E. ..... 303 East Union, Wynne 72396, 238-2321
Burks, Willard G. ..... 303 East Union, Wynne 72396, 238-2321
Crain, Vance J. ..... 303 East Union, Wynne 72396, 238-2321
Hayes, Robert A. ..... 411 South State, Wynne 72396, 238-326!
Hickman, Roger L. ..... Memphis, Tennessee
*Price, Thomas G. ..... Wynne
Young, John H. ..... 411 South State, Wynne 72396, 238-3261

DALLAS COUNTY

Adams, Carl H. ..... Carthage Clinic, Carthage 71725, 254-2211
Atkinson, H. H. ..... 300 Cadiz, Fordyce 71742, 352-2537
Delamore, John H. ..... P. O. Box 351, Fordyce 71742, 352-2771
Dobson, Jack T. ..... 110 North Clifton, Fordyce 71742, 352-3151
Estes, Everette E. ..... 205 East 3rd, Fordyce 71742, 352-2626
Howard, Don G. ..... 110 North Clifton, Fordyce 71742, 352-3151
Taylor, George D. ..... Sparkman Clinic, Sparkman 71763, 678-2406

DESHA COUNTY

*Biscoe, Goree ..... Dumas
Blackwell, O. G. ..... 145 West Waterman, Dumas 71639, 382-4878
Harris, Howard R. ..... 207 South Elm, Dumas 71639, 382-4425
Lazenby, Albert W. ..... 145 West Waterman, Dumas 71639, 382-4878
Moss, Swan B. ..... 202 North 4th, McGehee 71654, 222-3141
Robinson, Guy U. ..... 207 South Elm, Dumas 71639, 382-4425
Turney, Lonnie R. ..... 2nd and Pine Streets, McGehee 71654, 222-4044

DREW COUNTY

Binns, Van C. ..... 201 East Trotter, Monticello 71655, 367-3531
Busby, Arlee K. ..... 816 North Hyatt, Monticello 71655, 367-3246
Holder, James B., Jr. ..... VA Hospital, Little Rock 72206, 372-8361
Hyatt, C. Lewis ..... 515 North Main, Monticello 71655, 367-5393
Price, John P. ..... 216 South Main, Monticello 71655, 367-5251
Wallick, Paul A. ..... 216 South Main, Monticello 71655, 367-5251

FAULKNER COUNTY

Archer, C. A., Jr. ..... 919 Locust, Conway 72032, 329-2946
Banister, 8enjamin F., Jr. ..... 222 E. 8oulevard, Conway 72032 (Res), 327-0470
8anister, Bob G. ..... 1300 North Parkway, Conway 72032, 329-3824
Benafield, Robert B. ..... 919 Locust, Conway 72032, 329-2946
Clark, Robert L. ..... 810 Parkway, Conway 72032, 329-8313
Daniel, Sam V. ..... 574 Locust, Conway 72032, 329-6111
Downs, Joseph H. ..... P. O. Box 56, Vilonia 72173, NF
Dunaway, Edwin L. ..... 919 Locust, Conway 72032, 329-2946
Gordy, L. Fred, Jr. ..... 552 Locust, Conway 72032, 329-6881
Lieblong, Keller ..... 1300 North Parkway, Conway 72032, 329-3824
Lyford, Joseph H. ..... 4301 West Markham, Little Rock 72205, 664-5000
Poindexter, Ann G. ..... 919 Locust, Conway 72032, 327-0262
Poindexter, Douglas A. ..... 919 Locust, Conway 72032, 327-0262
Sutter, L. O'Neal ..... Arkansas Children's Colony, Conway 72032, 329-6851
Taylor, Robert L. ..... 810 Parkway, Conway 72032, 329-3815

FRANKLIN COUNTY

Blanton, David E. R. ..... 110 West Commercial, Ozark 72949, 667-2146
Calaway, Robert L. ..... Drawer C, Mulberry 72947, 997-3941
Gibbons, David L. ..... Gibbons Clinic, Ozark 72949, 667-2285
*Gibbons, William H. ..... Ozark
Long, Clifton C. ..... 110 West Commercial, Ozark 72949, 667-2146
Roberts, William J. ..... P. O. Box 428, Charleston 72933, 965-2672

GARLAND COUNTY

Adams, Frank M. ..... 236 Central, Hot Springs 71901, 623-8751
Arnold, William O. ..... 1315 Central, Hot Springs 71901, 624-1207
Atkinson, Robert H. ..... 236 Central, Hot Springs 71901, 623-6101
*Bennett, R. V. ..... Hot Springs
8lack, Thomas N. ..... 133 Oakwood, Hot Springs 71901 (Res.), 623-2156
8ohnen, Loren O. ..... 236 Central, Hot Springs 71901, 623-6693
Bracken, Ronald J. ..... 505 West Grand, Hot Springs 71901, 624-4478
8rewer, Howell W. ..... Memphis, Tennessee
Burrow, Thomas E. ..... 236 Central, Hot Springs 71901, 623-8110
Burton, Frank M. ..... 101 Whittington, Hot Springs 71901, 624-5411
Chamberlain, Joe W. ..... 330 Sixth Street, Hot Springs 71901, 623-4477
Chamberlain, Warren W. ..... 330 Sixth Street, Hot Springs 71901, 623-4477
*Chenault, H. Clay ..... Hot Springs
Clardy, Edgar K. ..... P. O. Box 850, Hot Springs 71901, 624-1281
Coffey, George C. ..... 236 Central, Hot Springs 71901, 623-2731
Collier, T. J., Sr. ..... 501 Malvern, Hot Springs 71901, 623-8864
Daniel, R. L. ..... Route 4, Box 452H, Hot Springs 71901 (Res.), 767-3314
Dembinski, T. Henry ..... 804½ Central, Hot Springs 71901, 623-9781
Devine, J. C. ..... 505 West Grand, Hot Springs 71901, 623-9216
Dodson, John W., Jr. ..... 505 West Grand, Hot Springs 71901, 623-4541
Durham, Thomas M., Jr. ..... 505 West Grand, Hot Springs 71901, 623-7717
Eisele, W. Martin ..... 101 Whittington, Hot Springs 71901, 624-5411
Fotioo, George J. ..... 236 Central, Hot Springs 71901, 623-5121
French, James H. ..... 101 Whittington, Hot Springs 71901, 624-5411
Garner, O. P. ..... 1705 Central, Hot Springs 71901, 623-3521
Garratt, Charles E. ..... 236 Central, Hot Springs 71901, 623-2691
Gaston, E. Kenneth, Sr. ..... 236 Central, Hot Springs 71901, 624-5666
Goetze, Dorothy ..... 104 Curve Street, Hot Springs 71901 (Res.), 623-4913
Goodrum, William A. ..... 236 Central, Hot Springs 71901, 623-7031
Graham, Richard F. ..... 505 West Grand, Hot Springs 71901, 623-4391
Haggard, John L. ..... 101 Whittington, Hot Springs 71901, 624-5411
Hassard, George H. ..... Rehabilitation Center, Hot Springs 71901, 624-4411
Hebert, Gaston A. ..... Rehabilitation Center, Hot Springs 71901, 624-4411
Hill, Robert L. ..... 236 Central, Hot Springs 71901, 623-9581
Hoyt, Jerry L. ..... 328 Quapaw, Hot Springs 71901, 624-4581
Jackson, Haynes G. ..... P. O. Box 2067, Hot Springs 71901, 623-6628
Keadle, William R. ..... 408 #8 Highway, Glenwood 71943, 356-3155
King, Jack A. ..... 300 Woodbine, Hot Springs 71901, 624-3379
King, Leeman H. ..... 236 Central, Hot Springs 71901, 623-1545
Klugh, Walter G., Jr. ..... 505 West Grand, Hot Springs 71901, 623-9216
Klugh, Walter G., Sr. ..... 238 Woodbine, Hot Springs 71901, 623-4511
Lee, William R. ..... 236 Central, Hot Springs 71901, 623-2518
Lewis, Robert L. ..... 236 Central, Hot Springs 71901, 624-2354
Lovell, Clawrence R. ..... 414 Albert Pike, Hot Springs 71901, 624-3606
McConkie, Stuart B. ..... 715 West Grand, Hot Springs 71901, 623-5300
McCrary, Robert F. ..... 505 West Grand, Hot Springs 71901, 624-5477
McFarland, Louis R. ..... 211 Hobson, Hot Springs 71901, 623-5752
McMahan, James C. ..... 306 Albert Pike, Hot Springs 71901, 624-2111
Mashburn, William R. ..... 236 Central, Hot Springs 71901, 623-4453
Meek, Gary N. ..... 236 Central, Hot Springs 71901, 623-9581
Murray, Du8ose ..... 505 West Grand, Hot Springs 71901, 623-7717
Pappas, Deno P. ..... 101 Whittington, Hot Springs 71901, 624-5411
Parkerson, Carl R. ..... 1421 Central, Hot Springs 71901, 624-3341
Parkerson, Cecil W. ..... 1421 Central, Hot Springs 71901, 624-3341
Patterson, Ralph M. ..... 231 Central, Hot Springs 71901, 624-5567
Power, Allyn R. ..... 236 Central, Hot Springs 71901, 623-3102
*Purdum, E. A. ..... Hot Springs
Queen, George P. ..... 236 Central, Hot Springs 71901, 623-3373
Reed, Lon E. ..... 1315 Central, Hot Springs 71901, 624-1207
Rosenzweig, Joseph L. ..... 236 Woodbine, Hot Springs 71901, 624-2546
Rowland, E. Driver ..... 110 Hawthorne, Hot Springs 71901, 623-5581
Sammons, Vernon E., Jr. ..... 236 Central, Hot Springs 71901, 623-9581
Scully, Francis J. ..... 16 Conway Road, Hot Springs 71901 (Res.) 623-3726
Smith, Oliver A. ..... 236 Central, Hot Springs 71901, 623-1121
Smith, William K. ..... 236 Central, Hot Springs 71901, 623-2171
Springer, Melvin R., Jr. ..... 236 Central, Hot Springs 71901, 623-6693
Springer, William Y. ..... 236 Central, Hot Springs 71901, 623-6693
Stough, D. B. ..... 236 Central, Hot Springs 71901, 623-6921
Stough, D. Bluford, III ..... 236 Central, Hot Springs 71901, 624-3201
Thompson, Thomas P., Jr. ..... 101 Whittington, Hot Springs 71901, 624-5411
Trieschmann, John W. ..... 236 Woodbine, Hot Springs 71901, 624-2546
Wade, H. King, Jr. ..... 231 Central, Hot Springs 71901, 624-5641
*Wade, H. King, Sr. ..... Hot Springs
Woodcock, William A. ..... Temple, Texas
Wright, Jack ..... 211 Hobson, Hot Springs 71901, 623-6677
Yohe, Charles D. ..... 236 Central, Hot Springs 71901, 623-2517

GRANT COUNTY

Clark, Curtis B. ..... 200 South Rose, Sheridan 72150, 942-3914
Irvin, Jack M. ..... 205 High, Sheridan 72150, 942-3171

Kelly, Miles F. 108 South Arch, Sheridan 72150, 942-4152
Paulk, Clyde D. 200 South Rose, Sheridan 72150, 942-3155

GREENE-CLAY COUNTY

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Baker, Clark M. 115 West Court, Paragould 72450, 236-6356
Bradsher, Omer E. 901 West Kingshighway, Paragould 72450, 236-8765
Crow, Asa A. 320 South 10th, Paragould 72450, 236-3508
Duckworth, Gordon L., Jr. Piggott Hospital, Piggott 72454, 598-2237
Duckworth, Hillard R. Piggott Hospital, Piggott 72454, 598-2237
Finch, Robert M. 1001 Kingshighway, Paragould 72450, 236-7623
Futrell, J. Byron Rector 72461 (Res.), 595-3332
Harper, Bland R. P. O. Box C, Monette 72447, 486-2131
Lawson, J. Larry P. O. Box 6, Paragould 72450, 239-9631
McGaughey, Solon 4525 West 11th, Little Rock 72204 (Res.), 664-3040
McKelvey, Earle D. 409 South 5th, Paragould 72450, 236-8716
Martin, Richard O. P. O. Box 339, Paragould 72450, 236-7733
Muse, Jerry L. Piggott Hospital, Piggott 72454, 598-2237
Page, Bill C. 602 West 2nd, Corning 72422, 857-3541
Purcell, Donald I. 4301 West Markham, Little Rock 72205, 664-5000
Richmond, Jack G. P. O. Box 339, Paragould 72450, 236-7733
Shedd, Leonus L. 901 West Kingshighway, Paragould 72450, 236-8765
Watson, Samuel D. 7th & Kingshighway, Paragould 72450, 236-8591
Williams, Jacob M. 1001 West Kingshighway, Paragould 72450, 236-7623

HEMPSTEAD COUNTY

Branch, James W. 426 South Main, Hope 71801, 777-3471
Harris, C. Lynn 820 South Main, Hope 71801, 777-2131
Harris, Lowell O. 820 South Main, Hope 71801, 777-2131
Holt, Forney G. 420 East 2nd, Hope 71801, 777-6722
McKenzie, Jim P. O. Box 445, Hope 71801, 777-2321
Martindale, James G. 116 South Main, Hope 71801, 777-3464
Martindale, Jud B. 116 South Main, Hope 71801, 777-3464
Royal, Jack L. 4301 West Markham, Little Rock 72205, 664-5000
Wright, George H. 420 East 2nd, Hope 71801, 777-6722

HOT SPRING COUNTY

*Berry, Morgan C. Malvern
Brashears, Larry B. 214 East Highland, Malvern 72104, 332-5245
Cobb, Russell W. 1420 Potts, Malvern 72104, 332-3112
Cole, John W. 725 East Page, Malvern 72104, 332-5641
Ellis, C. Randolph 1004 South Main, Malvern 72104, 332-6941
Kersh, Noah B. 1415 West Smith, Malvern 72104, 337-7533
McCray Raymond V. 214 East Highland, Malvern 72104, 332-2704
Peters, Claude F. 1420 Potts, Malvern 72104, 332-2521
Vaughan, John A. 115 East Highland, Malvern 72104, 332-2371
White, Robert H. 1004 Dyer, Malvern 72104, 332-3664
Wise, John D. 1219 South Main, Malvern 72104, 332-6961

HOWARD-PIKE COUNTY

Dildy, Edwin V., Jr. 112 West Hempstead, Nashville 71852, 845-1933
Floyd, G. J., Jr. P. O. Box 279, Murfreesboro 71958, 285-3341
Holt, H. H. Mineral Springs Highway, Nashville 71852, 845-2406
Jones, William J. P. O. Box 49, Glenwood 71943, 356-3921
Lewis, Rodger P. Houston, Texas
Smith Uthel L. 630 West Howard, Nashville 71852 (Res.), 845-1595
Stringfellow, Jerry B. 1400 East 35th Street, Texarkana 75501, 773-6745
Turbeville, James O. 120 West Sypert, Nashville 71852, 845-4676
Ward, Hiram T. 510 North Washington, Murfreesboro 71958, 285-2491
Webb, Kathleen E. 2701 Pine, Texarkana 75501(Res.) 214-792-9353
Wesson John H. 120 West Sypert, Nashville 71852, 845-4676
Wilmoth, Marion H. 1400 Leslie, Nashville 71852, 845-4780

INDEPENDENCE COUNTY

Beck, Carl T. P. O. Box 37, Mountain View 72560, 269-3834
Calaway, William H. North Arkansas Clinic, Batesville 72501, 793-5251
Churchill, Calvin A. 204 East 6th, Batesville 72501 (Res.), 793-5194
Gray, Paul P. O. Box 31, Batesville 72501, 793-2321
Hathcock, Alfred H. P. O. Box 310, Batesville 72501, 793-3671
Jeffery, Paul H. Route 4, Batesville 72501 (Res.), 793-9363
Johnston, O. J. T. P. O. Box 856, Batesville 72501 (Res.), 793-7127
Ketz, Wesley J. P. O. Box 960, Batesville 72501, 793-2371
Lytle, Jim E. North Arkansas Clinic, Batesville 72501, 793-5251
Monroe, Howard U. Mountain View 72560, 269-3236
Raney, Troy Medical Clinic, Cave City 72521, 283-5762
Slaughter, Bob L. P. O. Box 1411, Batesville 72501, 743-2540
Smith, Bob G. North Arkansas Clinic, Batesville 72501, 793-5251
Stalker, James M. P. O. Box 1506, Batesville 72501, 743-5205
Tatum, Harold M. P. O. Box 147, Melbourne 72556, 368-4344
Taylor, Chaney W. North Arkansas Clinic, Batesville 72501, 793-5251
Taylor, Charles A. North Arkansas Clinic, Batesville 72501, 793-5251
Walker, A. T. Mammoth Spring 72554, 625-3232
Wyatt, Finis Q. North Arkansas Clinic, Batesville 72501, 793-5251

JACKSON COUNTY

Ashley, John D., Jr. 2nd and Laurel, Newport 72112, 523-6721
Dudley, Guilford M. 1205 McLain, Newport 72112, 523-5871
Frankum, Jerry M., Jr. 2nd and Laurel, Newport 72112, 523-6721
Green, Roger L. 2nd and Laurel, Newport 72112, 523-6721
Harris, M. Haymond 1205 McLain, Newport 72112, 523-5871
Jackson, Jabez F. 1205 McLain Newport 72112, 523-5871
Norris, R. O. P. O. Box 124, Tuckerman 72473, 349-5527
Stanfield, Wayne 1513 Malcolm, Newport 72112, 523-3321
Williams, Thomas E. 2nd and Laurel, Newport 72112, 523-6721
Wright, John C. 1205 McLain, Newport 72112, 523-5871

JEFFERSON COUNTY

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Atnip, Gwyn 1111 West 15th, Pine Bluff 71601, 535-3551
Barksdale, Barbara A. Barksdale Clinic, Rison 71665, 325-6224
Blackwell, Banks 1726 Doctors Drive, Pine Bluff 71601, 534-3122
Brooks, R. Teryl, Jr. 1421 Cherry, Pine Bluff 71601, 535-2200
Bryant, R. Frank 1112 Linden, Pine Bluff 71601, 534-4352
Buckley, John W. 1714 Doctors Drive, Pine Bluff 71601, 535-5719
Burford, Thomas G. 106 Pennsylvania, Pine Bluff 71601 (Res.), 534-6981
Burroughs, Clement D. 1515 West 42nd, Pine Bluff 71601, 534-8651
Clark, James F., Jr. 1515 West 42nd, Pine Bluff 71601, 535-6800
Coker, S. D. 1720 Doctors Drive, Pine Bluff 71601, 536-4986
Crane, Henry A., Jr. 1107 Cherry, Pine Bluff 71601, 535-0833
Crenshaw, John 1421 Cherry, Pine Bluff 71601, 535-2200
Crow, Reece L., Jr. 1724 Doctors Drive, Pine Bluff 71601, 536-5861
Cunningham, Thomas J., Jr. 300 West 6th, Pine Bluff 71601, 534-4723
Dean, Lee A. 1110 West 11th, Pine Bluff 71601, 534-1834
Dickins, Robert D. 1003 Cherry, Pine Bluff 71601, 534-8141
Fendley, Claude E. P. O. Box 7863, Pine Bluff 71601, 534-8651
Flowers, Cleon A. Masonic Temple, Pine Bluff 71601, 534-5523
Glasscock, Robert E. 1706 Doctors Drive, Pine Bluff 71601, 534-4357
Hart, J. Clyde, Jr. 1310 Cherry, Pine Bluff 71601, 534-6210
Henderson, Francis M. 1310 Cherry, Pine Bluff 71601, 534-6210
Hoover, Sherman H. 1421 Cherry, Pine Bluff 71601, 535-2200
Hutchison, Ernest L. 1724 West 42nd, Pine Bluff 71601, 535-1562
Hyman, Carl E. Masonic Temple, Pine Bluff 71601, 534-3365
Irwin, Raymond A. 1421 Cherry, Pine Bluff 71601, 535-2200
James, William J. 3800 Poplar, Pine Bluff 71601 (Res.), 535-6627
Jenkins, Bobby J. 4301 West Markham, Little Rock 72205, 664-5000
Jenkins, Mary E. 1410 West 42nd, Pine Bluff 71601, 535-5522
King, Yum Y. 1008 West 11th, Pine Bluff 71601, 536-1897
McDonald, Robert L. P. O. Box 7863, Pine Bluff 71601, 534-8651
Maynard, Ross E. National Building, Pine Bluff 71601, 534-5732
Meredith, William R. 1716 West 42nd, Pine Bluff 71601, 535-8727
Miller, Donald L. 1710 West 42nd, Pine Bluff 71601, 535-6644
Milligan, Monte C. 1515 West 42nd, Pine Bluff 71601, 534-8651
Monroe, Sanford C. 1421 Cherry, Pine Bluff 71601, 535-2200
Morris, Harold J. 1030 Poplar, Pine Bluff 71601, 534-0822
Nash, Carl W. 4301 West Markham, Little Rock 72205, 664-5000
Nixon, William R. 709 West 6th, Pine Bluff 71601, 534-2624
Payne, Virgil L. 802 West 5th, Pine Bluff 71601 (Res.), 534-5618
Perry, V. Bryan 1722 West 42nd, Pine Bluff 71601, 535-4141
Pierce, J. R., Jr. 1712 West 42nd, Pine Bluff 71601, 535-3443
Raney, Oliver C. 1720 West 42nd, Pine Bluff 71601, 534-5861
Reed, E. Frank, Jr. 916 Cherry, Pine Bluff 71601, 535-0121
Reed, Ulysses S. Masonic Temple, Pine Bluff 71601, 534-6910
Reid, Charles W. 1113 Cherry, Pine Bluff 71601, 534-0240
Rhyne, James T. 1310 Cherry, Pine Bluff 71601, 534-6210
Rice, James B. 1410 West 42nd, Pine Bluff 71601, 535-5522
Rittelmeyer, Clarence McN. 1716 West 42nd, Pine Bluff 71601, 535-8727
Roberson, George V., Jr. 1708 Doctors Drive, Pine Bluff 71601, 535-2716
Robinette Joseph S. 1722 Doctors Drive, Pine Bluff 71601, 535-2372
Russell, Allen R. 1024 Poplar, Pine Bluff 71601, 535-2252
Simmons, Calvin R. 1714 West 42nd, Pine Bluff 71601, 535-3213
Smith, Robert J. 817 Cherry, Pine Bluff 71601, 535-1880
Stern, Howard S. 1315 Linden, Pine Bluff 71601, 534-0342
Sullenberger, A. G. 1726 West 42nd, Pine Bluff 71601, 534-4407
Talbot, George B. 1421 Cherry, Pine Bluff 71601, 535-2200
Tisdale, Alfred D., Jr. 1515 West 42nd, Pine Bluff 71601, 535-6616
Townsend, Thomas E. 1310 Cherry, Pine Bluff 71601, 534-6210
Tracy, Clyde 1421 Cherry, Pine Bluff 71601, 535-2200
Wilkins, Walter J., Jr. 1421 Cherry, Pine Bluff 71601, 535-2200
Wineland H. L. 1710 Doctors Drive, Pine Bluff 71601, 534-3561
Wooley, Ralph R. P. O. Box 7267, Pine Bluff 71601, 535-2421

JOHNSON COUNTY

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Shrigley, Guy P. 416 Sevier, Clarksville 72830, 754-2043
Underwood, Clyde P. O. Box 350, Clarksville 72830, 754-8333

LAFAYETTE COUNTY

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Harrison, Robert H. Lewisville 71845, 921-4333
Jackson, William E. P. O. Box 365, Rison 71665, 325-6255
Lee, Willie J. P. O. Box 276, Stamps 71860, 533-4461

LAWRENCE COUNTY

Cruse, Edward J. P. O. Box 116, Black Rock 72415, 878-6209
Dickey, Albert B. 704 Northwest 3rd, Walnut Ridge 72476 (Res.), 886-5377
Elders, John B. 321 Southwest 3rd, Walnut Ridge 72476, 886-3162
Hickman, James H. 421 Southwest 3rd, Walnut Ridge 72476, 886-6222
Hughes, Joe E. Highway 25 West, Walnut Ridge 72476, 886-5123
Joseph, Ralph F. Highway 25 West, Walnut Ridge 72476, 886-3211
Whittington, J. J., III Highway 25 West, Walnut Ridge 72476, 886-3552

LEE COUNTY

Dozier, Floyd S. 29 North Poplar, Marianna 72360, 295-2107
Fields, E. C. Nowell Route 3, Box 22A, Marianna 72360, 295-2616
Flowers, Bobby F. 100 West Main, Marianna 72360, 295-3362
Gray, Dwight W. 110 West Chestnut, Marianna 72360, 295-3131
McLendon, Mac Post Office Box 536, Marianna 72360, 295-2711

LINCOLN COUNTY

Freeland, James W. P. O. Box 608, Star City 71667, 628-4226
Petty, Richard C. P. O. Box 580, Star City 71667, 628-4292

LITTLE RIVER COUNTY

Armstrong, James D. P. O. Box 397, Ashdown 71822, 898-3306
Peacock, Norman W., Jr. P. O. Box 397, Ashdown 71822, 898-3306
Shelton, Joseph G., Jr. P. O. Box 397, Ashdown 71822, 898-3306
Warren, Robert H. Shreveport, Louisiana

LOGAN COUNTY

Chalfant, Charles H. 114 West Third, Booneville 72927, 675-2455
Jones, W. Duane State Sanatorium, Booneville 72927, 675-2121
Parker, B. G. 121 East 3rd, Booneville 72927, 675-2101
Robins, Rowland R. State Sanatorium, Booneville 72927, 675-2121
Smiley, George W. State Sanatorium, Booneville 72927, 675-2121
Smith, Charles McD. 710 North Express, Paris 72855, 963-2191
Smith, James T. 710 North Express, Paris 72855, 963-2191

LONOKE COUNTY

Gartman, Joseph F. Court Street, Carlisle 72024, 552-7561
Harris, Willie R. England Hospital, England 72046, 842-2686
Holmes, Byron E. 305 West Front, Lonoke 72086, 676-6560
Inman, Fred C., Jr. 521 North Williams, Carlisle 72024, 552-7575

McEntire, Harry E. ..... Fort Roots VA Hospital, North Little Rock 72114, 372-8361
Schumann, Gerald M. ..... Des Arc General Hospital, Des Arc 72040, 256-4312
Washburn, C. Yulan ..... P. O. Drawer H, Cabot 72023, 843-3579
Wood, Thomas O., Jr. ..... England Hospital, England 72046, 842-2686

MILLER COUNTY

Alston, Thomas J. ..... Memphis, Tennessee
Andrews, Allie E., Jr. ..... 315 East Fifth, Texarkana 75501, 774-4111
Bransford, Robert M. ..... 401 East 5th, Texarkana 75501, 773-2121
Burnett, James W. ..... 414 Hazel, Texarkana 75501, 774-7301
Burroughs, James C. ..... 401 East 5th, Texarkana 75501, 773-2121
Chappell, Robert H. ..... P. O. Box 1288, Texarkana 75501, 214-794-5943
Davis, Terry R. ..... 1400 College Drive, Texarkana 75501, 214-793-5671
Dodge, John McL. ..... P. O. Box 1409, Texarkana 75501, 214-792-7151
Edmonson, Retia L. ..... 916 Main, Texarkana 75501, 214-793-5592
Ellison, Eugene T. ..... P. O. Box 1409, Texarkana 75501, 214-792-7151
Goesl, Andrew G. ..... 119 East 6th, Texarkana 75501, 774-4702
Harrell, William B., Jr. ..... 317 State Line, Texarkana 75501, 214-792-8231
Harrison, Jack W. ..... P. O. Box 778, Texarkana 75501, 773-2121
Hughes, Mary W. ..... 1001 Main, Texarkana 75501, 214-792-6976
Hughes, Paul ..... 401 East 5th, Texarkana 75501, 773-2121
Jones, John W. ..... 401 East 5th, Texarkana 75501, 773-2121
Kemp, Karlton H. ..... 408 Hazel, Texarkana 75501, 774-5181
Kirkpatrick, Robert R. ..... 1806 Hickory Street, Texarkana 75501 (Res.), 774-4954
Kittrell, James B. ..... Box 1453, Texarkana 75501, 214-794-6107
Laws, J. K. ..... St. Michael Hospital, Texarkana 75501, 774-7297
Lowe, Betty A. ..... 401 East 5th, Texarkana 75501, 773-2121
McGinnis, Robert S., Sr. ..... 4800 Texas Boulevard, Texarkana 75501, 214-792-7151
Newton, Norris L. ..... 602 Main, Texarkana 75501, 214-792-8541
Peebles, Larry M. ..... 1400 College Drive, Texarkana 75501, 214-793-5671
Pickett, R. W. ..... Route 7, Box 306K, Texarkana 75501 (Res.), 773-3454
Rodgers, Nathaniel L. ..... 401 East 5th, Texarkana 75501, 773-2121
Rushing, Louis U. ..... P. O. Box 1471, Texarkana 75501, 214-792-1191
Short, Harold H. ..... 1400 College Drive, Texarkana 75501, 214-793-5671
Smith, William D. ..... 119 East 6th, Texarkana 75501, 772-0111
Teasley, Gerald H. ..... 401 East 5th, Texarkana 75501, 773-2121
Townsend, Gene M. ..... 1400 College Drive, Texarkana 75501, 214-793-5671
Wakefield, Elmer G. ..... P. O. Box 2035, Texarkana 75501 (Res.), 772-0853
Wicker, Eugene H. ..... St. Michael Hospital, Texarkana 75501, 773-2651
Wilhelm, Frieda ..... Dallas, Texas
Wren, Herbert B. ..... P. O. Box 1409, Texarkana 75501, 214-792-7151
Young, Mitchell ..... 2123 Wood, Texarkana 75501, 214-792-8264

MISSISSIPPI COUNTY

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Brock, Charles C., Jr. ..... 527 North 6th, Blytheville 72315, 763-8118
Campbell, Charles E., Jr. ..... 519 North 6th, Blytheville 72315, 763-0855
Cole, C. R. ..... 519 North 6th, Blytheville 72315, 763-1554
Elliott, John Q. ..... 209 West Ash, Blytheville 72315, 763-4548
Fairley, Eldon ..... P. O. Box 71, Osceola 72370, 563-2686
Fairley, Julian ..... P. O. Box 71, Osceola 72370, 563-2686
Go, Alex S. Y. ..... Military Service, NF
Gratz, John F., Jr. ..... Osceola Memorial Hospital, Osceola 72370, 563-2611
Green, W. O., Jr. ..... 903 Chickasawba, Blytheville 72315, 763-6802
Hard, John W. ..... 527 North 6th, Blytheville 72315, 763-8118
Hart, Sybil R. ..... Chickasawba Hospital, Blytheville 72315, 763-1617
Hart, Wade A. ..... Chickasawba Hospital, Blytheville 72315, 763-1617
Holcomb, C. E. ..... 511 North 6th, Blytheville 72315, 763-3922
Hubener Lemly L. ..... 509 Hutson Street, Blytheville 72315, 762-2021
Hubener, Louis F. ..... Gainesville, Florida
Johnson, Rass L. ..... P. O. Box 414, Blytheville 72315 (Res.), 763-6201
Jones, Herbert ..... 529 North 10th, Blytheville 72315, 763-8032
Massey, Lorenzo D. ..... 307 West Hale, Osceola 72370, 563-6242
Osborne, Merrill J. ..... 527 North 6th, Blytheville 72315, 763-8118
Polk, Joe T. ..... Keiser 72351, 526-2121
Pollock, George D. ..... 608 West Lee, Osceola 72370, 563-2608
Rainwater, W. T. ..... 527 North 6th, Blytheville 72315, 763-8118
Rhodes, R. F. ..... 608 West Lee, Osceola 72370, 563-2608
Rodman, T. N. ..... P. O. Box 260, Leachville 72438, 539-6337
Shaneyfelt, E. A. ..... P. O. Box 468, Manila 72442, 561-4471
Sims, Hunter C., Jr. ..... 525 North 10th, Blytheville 72315, 763-0521
Sims, Hunter C., Sr. ..... 1111 West Ash, Blytheville 72315 (Res.), 762-2886
Taylor, G. Wayne ..... P. O. Box 290, Leachville 72438, 539-2228
Utley, Francis E. ..... 515 North 6th, Blytheville 72315, 763-4575
Webb, James J. (Jack) ..... 520 West Main, Blytheville 72315, 762-2131
Workman, W. W. ..... 527 North 6th, Blytheville 72315, 763-8118

MONROE COUNTY

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David, N. C., Jr. ..... 108 West Ash, Brinkley 72021, 734-2212
McKnight, Edward D. ..... Brinkley Bank Building Brinkley 72021, 734-4234
Pupsta, Benedict F. ..... P. O. Box 432, Clarendon 72029, 747-3321
Stone, Herd E., Jr. ..... P. O. Box 221, Holly Grove 72069, 462-3393
Walker, Walter L. ..... 114 South New Orleans, Brinkley 72021, 734-3242
Williams, J. P., Jr. ..... 127 South New Orleans, Brinkley 72021, 734-1331

NEVADA COUNTY

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Crow, H. Blake ..... 327 East 2nd, Prescott 71857, 887-3846
Hairston, Glenn G. ..... 317 East 3rd, Prescott 71857, 887-2211
Harrell, L. J. ..... 115 East 2nd, Prescott 71857, 887-2312
Hesterly, Charles A. ..... Honokaa, Hawaii
*Hesterly, Jacob B. ..... Prescott

OUACHITA COUNTY

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Dedman, J. L., Jr. ..... 415 Hospital Drive, S.W., Camden 71701, 836-5013
Drewrey, Lawrence E. ..... 430 Magnolia Road, S.W., Camden 71701, 836-6811
Ellis, Bruce ..... Stephens 71764, 786-5755
Ellis, Joseph L. ..... Post Office Box 126, Camden 71701, 836-7144
Fohn, Charles H. ..... 110 Harrison Avenue, S.W., Camden 71701, 836-5088
Guthrie, James ..... 530 Jefferson, S.W., Camden 71701, 836-5058
Hawley, James W. ..... P. O. Box 38, Camden 71701, 836-5710
Hout, Judson N. ..... 530 Jefferson, S.W., Camden 71701, 836-5058
Jameson, J. B., Jr. ..... 110 Harrison, S.W., Camden 71701, 836-5088
Killough, Larry R. ..... 530 Jefferson, S.W., Camden 71701, 836-5058
Lewis, R. C. ..... P. O. Box 675, Camden 71701, 836-5753
Livingston, Bill B. ..... 430 Magnolia Road, Camden 71701, 836-6811
Meek, Tom J. ..... 415 Hospital Drive, S.W., Camden 71701, 836-5013
Miller, John H. ..... 415 Hospital Drive, S.W., Camden 71701, 836-5013
Ozment, L. V. ..... 530 Jefferson, S.W., Camden 71701, 836-5058
*Robins, R. B. ..... Chicago, Illinois
Thorne, Authur E. ..... Ouachita Hospital, Camden 71701, 836-9323

PHILLIPS COUNTY

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Bell, L. J. Pat ..... 626 Poplar, Helena 72342, 338-8163
Berger, Alfred A. ..... 801 Perry, Helena 72342, 338-8781
Biggs, William W. ..... Helena Hospital, Helena 72342, 338-6411
Butts, James W. ..... 708 McDonough, Helena 72342 (Res.) 338-8006
Capes, Bernard ..... P. O. Box 2398, West Helena 72390, 572-2621
Chrestman, Reuben L., Jr. ..... 631 Oakland Ave., Helena 72342, 338-3294
Ellis, William A., Jr. ..... 603 Porter, Helena 72342, 338-3037
Faulkner, Henry N. ..... 513 Porter, Helena 72342, 338-7401
Hill, William K. ..... Elaine 72333, 827-3461
Kirkman, C. M. T. ..... 1105 Perry, Helena 72342, 338-8712
Kurts, Evan J. ..... P. O. Box 2336, West Helena 72390, 572-2144
McCarty, Charles P. ..... 513 Porter, Helena 72342, 338-7401
Oldham, Hershell B. ..... P. O. Box 2538, West Helena 72390, 572-7581
Paine, W. T. ..... 671 Oakland Avenue, Helena 72342, 572-6413
Tonymon, Daniel ..... P. O. Box 278, Marvell 72366, 829-2721
Wise, James E., Jr. ..... P. O. Box 546, Marvell 72366, 829-2386

POLK COUNTY

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Hefner, David P. ..... 518 Janssen, Mena 71953, 394-3550
Redman, Pierre ..... 513 Mena, Mena 71953, 394-2277
Rogers, Henry N. ..... 600 West 7th, Mena 71953, 394-3344
Wood, John P. ..... 907 Mena, Mena 71953, 394-4221

POPE-YELL COUNTY

Ashcraft, Ted E. ..... 809 West Main, Russellville 72801, 967-2156
Bachman, David S. ..... 3005 West Main Place, Russellville 72801, 968-2345
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Gardner, Ellis ..... P. O. Box 400, Russellville 72801, 968-2242
Gardner, Joseph A. ..... 3005 West Main Place, Russellville 72801, 968-2345
Gavlas, Frank E. ..... 310 North 2nd, Dardanelle 72834, 229-4225
Harbison, James D. ..... 505 Union, Dardanelle 72834, 229-4172
Harris, Walter P. ..... 522 Main, Danville 72833, 495-2714
Heidgen, Martin F. ..... 1808 West Main, Russellville 72801, 968-1017
Henry, J. Arnold ..... 3005 West Main Place, Russellville 72801, 968-2345
King, William E., Jr. ..... 3005 West Main Place, Russellville 72801, 968-2345
Lane, Walter H., Jr. ..... 625 Water, Dover 72837, 331-2828
Lowrey, Douglas H. ..... 809 West Main, Russellville 72801, 967-2156
Luker, Jerome ..... 505 Union, Dardanelle 72834, 229-4172
McNamara, William L. ..... 2121 Towson, Fort Smith 72901 (Res.) 785-1441
Malone, George E. ..... 733 West Main, Atkins 72823, 641-2992
Martin, Damon G. H. ..... Ola 72853, 489-5801
Maupin, James L. ..... 505 Union, Dardanelle 72834, 229-4172
Millard, Roy I. ..... 3005 West Main Place, Russellville 72801, 968-2345
Mobley, Max J. ..... 111 North El Paso, Russellville 72801, 968-2242
New, Kenneth O. ..... 3005 West Main Place, Russellville 72801, 968-2345
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Ring, Gene D. ..... 505 Union, Dardanelle 72834, 229-4172
Teeter, Brooks R. ..... 500 South Glenwood, Russellville 72801 (Res.) 967-4545
Teeter, Stanley D. ..... 3005 West Main Place, Russellville 72801, 968-2345
Webb, Lewis A. ..... 312 North Second, Dardanelle 72834, 229-3329
Wilkins, Charles F. ..... 3005 West Main Place, Russellville 72801, 968-2345
Williams, David M. ..... 809 West Main, Russellville 72801, 967-2156

PULASKI COUNTY

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Abernathy, Robert S. ..... 4301 West Markham, Little Rock 72205, 664-5000
Abraham, James H. ..... 900 North University, Little Rock 72207, 664-3600
Adametz, John H. ..... Donaghey Building, Little Rock 72201, 375-5547
Alford, Dale ..... 5700 West Markham, Little Rock 72205, 664-5100
Allen, E. Stewert ..... 413 North University, Little Rock 72205, 663-8309
Allen, Hoyt R. ..... Rivercliff Apartments, 44C, Little Rock 72202 (Res.), 663-3896
Allen, John E., Jr. ..... 5512 West Markham, Little Rock 72205, 664-1000
Allen, Thomas H. Bill ..... 415 North University, Little Rock 72205, 663-9595
Armstrong, Howard M. ..... 12th and Bishop, Little Rock 72202, 372-5626
Ault, Charles C. ..... VA Hospital, North Little Rock 72114, 372-8361
Austin, Lester K., Jr. ..... 6213 Lee Avenue, Little Rock 72205, 664-4044
Autry, Daniel H. ..... 1900 North Tyler Little Rock 72207 (Res.) 664-2332
Baber, John C., Jr. ..... 500 South University, Little Rock 72205, 664-2434
Bailey, H. A. Ted, Jr. ..... 1610 West 3rd, Little Rock 72201, 372-1811
Baker, Johnson J. ..... 500 South University, Little Rock 72205, 664-4364
Baldridge, Harry K. ..... 7509 Cantrell, Suite 211, Little Rock 72207, 664-5808
Baldridge, John A. ..... 4301 West Markham, Little Rock 72205, 664-5000
Baldwin, Deane G. ..... 6213 Lee Avenue, Little Rock 72205, 664-4044
Barnhard, Fay M. ..... 1120 Marshall, Little Rock 72202, 374-9568
Barnhard, Howard J. ..... 4301 West Markham, Little Rock 72205, 664-5000
Barron, Edwin N., Jr. ..... 5008 Kavanaugh, Little Rock 72207, 664-1566
Bauer, Frank M. ..... 500 South University, Little Rock 72205, 664-2245
Bearden, James R. ..... 1612 Maryland, Little Rock 72202, 374-3351
Becquet, Norbert J. ..... 115 West Sixth, Little Rock 72201, 375-4419
Belknap, Melvin L. ..... 1801 Maple, North Little Rock 72114, 758-1002
Bennett, Eaton W. ..... 4313 West Markham, Little Rock 72205, 666-0181
Berry, Daisilee H. ..... 4301 West Markham, Little Rock 72205, 664-5000
Berry, Frederick B. ..... 500 South University, Little Rock 72205, 666-0222
Betts, Charles S. ..... 500 South University, Little Rock 72205, 663-9169
Bevans, David W. ..... 4301 West Markham, Little Rock 72205, 664-5000
Beverly, Nolan F. ..... St. Vincent Inf., Little Rock 72201, 661-3635

Biondo, Raymond V. 4301 West Markham, Little Rock 72205, 664-5000
Bishop, William B. 400 Pershing Blvd., No. Little Rock 72114, 664-3600
Bizzell, Ross 215 Exchange Building, Little Rock 72201, 376-2309
Black, Hal R., Jr. University Tower Building, Little Rock 72204, 664-4200
Black, Millard W. 705 North Ash, Little Rock 72205, 663-5413
Blakely, Rupert M. 211 Crystal Court, Little Rock 72205 (Res.) 663-2562
Boellner, Samuel W. 4301 West Markham, Little Rock 72205, 664-5000
Boop, Warren C., Jr. 4301 West Markham, Little Rock 72205, 664-5000
Bornhofen, John H. 4301 West Markham, Little Rock 72205, 664-5000
Bost, Roger B. 4301 West Markham, Little Rock 72205, 664-5000
Bowker, John H. 4301 West Markham, Little Rock 72205, 664-5000
Bradburn, Curry B., Jr. University Tower Building, Little Rock 72204, 664-4200
Brenner, George H., Jr. 1612 Maryland, Little Rock 72202, 374-3351
Briggs, Barney P. 500 South University, Little Rock 72205, 664-4117
Briggs, Dale D. 1210 Look Street, Little Rock 72204, 666-0326
Brinkley, Roy A. 1111 Bishop, Little Rock 72202, 375-1177
Brizzolara, A. J. 500 South University, Little Rock 72205, 664-4381
Broach, R. Fred 1201 Bishop, Little Rock 72202, 374-7467
Brown, Martha M. 2014 Boulevard, Little Rock 72204 (Res.) NF
Brown, T. Duel 1120 Marshall, Little Rock 72202, 375-3376
Browning, Donald G. 500 South University, Little Rock 72205, 664-4181
Buchanan, Francis R. 500 South University, Little Rock 72205, 664-4324
Buchanan, Gilbert A. 500 South University, Little Rock 72205, 664-4117
Buchman, Joseph A. 500 South University, Little Rock 72205, 666-0222
Bumpas, Joe H. St. Vincent Inf., Little Rock 72201, 661-3000
Burger, Robert A. 1700 West 13th Street, Little Rock 72201, 374-3351
Busby, John V. 1201 Bishop, Little Rock 72202, 374-7467
Byrd, Lucas M., Jr. 36 Lake Shore Drive, Little Rock 72204 (Res.) 565-6046
Calcote, Robert A. Donaghey Building, Little Rock 72201, 374-5969
Caldwell, Fred T. 4301 West Markham, Little Rock 72205, 664-5000
Calhoun, Joseph D. 500 South University, Little Rock 72205, 664-3914
Campbell, Gilbert S. 4301 West Markham, Little Rock 72205, 664-5000
Campbell, James W. 500 South University, Little Rock 72205, 664-3914
Caplinger, Kelsy J. 4001 West Capitol, Little Rock 72205, 664-1596
Carnahan, Robert G. 4313 West Markham, Little Rock 72205, 666-0181
Carruthers, F. Walter Donaghey Building, Little Rock 72201, 375-3372
Cazort, Alan G. 5117 Edgewood, Little Rock 72207 (Res.) 663-3623
Chakales, Harold H. Donaghey Building, Little Rock 72201, 375-3372
Chandler, Billy M. 406 Pershing Blvd., North Little Rock 72114, 758-1651
Chappell, Ewin S. 4313 West Markham, Little Rock 72205, 666-0181
Cheairs, David B. 1624 Maryland, Little Rock 72202, 374-2272
Choate, Hoyt L. 1100 Kavanaugh, Little Rock 72205 (Res.) 663-4362
Christeson, William W. 300 East Roosevelt Road, Little Rock 72206, 372-8361
Christian, John D. 5520 West Markham, Little Rock 72205, 666-9431
Chudy, Amail 1801 Maple, North Little Rock 72114, 758-1002
Church, B. L. 321 Maple, North Little Rock 72114, 374-7796
Church, Marion M. 410 Pershing Blvd., North Little Rock 72114, 758-1022
Clark, Richard B. 4301 West Markham, Little Rock 72205, 664-5000
Conroy, Norma H. 9501 Rodney Parham Road, Little Rock 72207, 225-8898
Cook, Raymond C. 601 Scott, Little Rock 72201, 375-8273
Cooper, James O. 4301 West Markham, Little Rock 72205, 664-5000
Cooper, William G. 500 South University, Little Rock 72205, 666-0149
Cope, Ellis P. 1714 North Palm Street, Little Rock 72207 (Res.) 663-2208
Cornell, Paul J. Donaghey Building, Little Rock 72201, 375-7228
Cornett, James K. 5905 "R" Street, Little Rock 72207, 663-9415
Cosgrove, K. W., Jr., 516 Scott, Little Rock 72201, 374-6338
Craig, Marion S., Jr. 500 South University, Little Rock 72205, 666-0106
Crews, J. Travis 4316 West Markham, Little Rock 72205, 664-2585
Cross, J. B. 500 South University, Little Rock 72205, 666-0126
Cull, S. T. W. Albert Pike Hotel, Little Rock 72201 (Res.) 374-8159
Cullen, Philip T. 500 South University, Little Rock 72205, 664-4171
Cummins, Bryce 31 Broadmoor Drive, Little Rock 72204 (Res.) 565-7450
Cutler, Otis E. 1700 West 13th Street, Little Rock 72201, 374-3351
Dalrymple, Glenn V. 4301 West Markham, Little Rock 72205, 664-5000
Darwin, William G. 6924 Geyer Springs Road, Little Rock 72209, 562-1463
Dean, Gilbert O. Donaghey Building, Little Rock 72201, 375-5543
Decker, Harold A. 4301 West Markham, Little Rock 72205, 664-5000
Deed, Eleanor P. 4301 West Markham, Little Rock 72205, 664-5000
Deer, Philip J., Jr. 601 Scott, Little Rock 72201, 375-8273
Dickins, Robert D., Jr. Donaghey Building, Little Rock 72201, 375-5547
Dilday, Thomas F., Jr. 500 South University, Little Rock 72205, 666-0381
Dildy, Hal R. P. O. Box 101, Lonoke 72086, 676-3161
Diner, Wilma J. 4301 West Markham, Little Rock 72205, 664-5000
Dodd, Doyne 4301 West Markham, Little Rock 72205, 664-5000
Dodge, Eva F. Quapaw Tower Apartments, Little Rock 72202 (Res.) 374-9349
Downs, John W. 500 South University, Little Rock 72205, 666-5922
Downs, Ralph A. 5512 West Markham, Little Rock 72205, 664-1762
Dulaney, Frank M., Jr. 1122 Marshall, Little Rock 72202, 374-9568
Dungan, William T. 4301 West Markham, Little Rock 72205, 664-5000
Durham, James W. 112 North Bailey, Jacksonville 72076, 982-2125
Eardley, Jack P. O. Box 3098, Little Rock 72204, 372-2763
Easley, Edgar J. 4815 West Markham, Little Rock 72205 661-2000
Eberle, Walter G., II University Tower Building, Little Rock 72204, 664-5884
Farmer, Joseph F. 9501 Rodney Parham Road, Little Rock 72207, 225-2594
Farris Guy R. 6213 Lee Avenue, Little Rock 72205, 664-2115
Fein, Norman N. Waldon Building, Little Rock 72201, 374-8441
Fielder, Charles R. 406 Pershing Blvd., North Little Rock 72114, 758-1620
Fitzgibbon, Carney, Jr. 410 South Martin, Little Rock 72205 (Res.) 666-8861
Flack, James V., Jr. 814 North University, Little Rock 72205, 663-9474
Flanigan, Stevenson 4301 West Markham, Little Rock 72205, 664-5000
Fletcher, Elizabeth D. 4313 West Markham, Little Rock 72205, 666-0181
Fletcher, Thomas M. 500 South University, Little Rock 72205, 664-3021
Floyd, Bill G. 1120 Marshall, Little Rock 72202, 372-2125
Foster, Julian L. 3500 South University, Little Rock 72204, 562-4838
Fraiser, Lacy P. University Tower Building, Little Rock 72204, 664-4200
Frauntelder, F. T. 4301 West Markham, Little Rock 72205, 664-5000
Fulmer, H. Ray Donaghey Building, Little Rock 72201, 374-1649
Fulmer, John M. 5410 West Markham, Little Rock 72205, 664-3142
Fulton, William L. 513 Main, North Little Rock 72114, 375-2433
Gay, Ellery C., Jr. 5326 West Markham, Little Rock 72205, 664-1118
Gibbins, Jack C. Tanglewood Shopping Center, Little Rock 72207, 666-8712
Giles, Wilbur M. 4301 West Markham, Little Rock 72205, 664-5000
Gillespie, A. Tharp 500 South University, Little Rock 72205, 664-3838
Glenn, Robert E. 516 Pershing, North Little Rock 72114, 758-1530
Glenn, Wayne B. 4301 West Markham, Little Rock 72205, 664-5000
Glover, William C. 1612 Maryland, Little Rock 72202, 374-3351
Good, Henry H. 1201 Bishop, Little Rock 72202, 374-7467
Gordon, Vida H. 4301 West Markham, Little Rock 72205, 664-5000
Gosser, Bob L. 516 Pershing, North Little Rock 72114, 758-1530
Graham, G. Grimsley 5322 West Markham, Little Rock 72205, 663-9433
Graupner, Kathryn I. VA Hospital, North Little Rock 72114, 372-8361
Gray, Edwin F. Donaghey Building, Little Rock 72201, 376-1321
Greifenstein, F. E. 4301 West Markham, Little Rock 72205, 664-5000
Greutter, John E., Jr. Donaghey Building, Little Rock 72201, 372-6139
Grimes, H. Austin P. O. Box 7117, Little Rock 72205, 666-9491
Growdon, James H. 500 South University, Little Rock 72205, 664-4146
Hagler, James L. 500 South University, Little Rock 72205, 664-4377
Hall, Alastair D. 500 South University, Little Rock 72205, 664-0027
Hamilton, Wilburn M. Donaghey Building, Little Rock 72201, 374-8633
Harper, Ernest H. 400 Pershing Square, North Little Rock 72114, 664-3600
Harrel, J. A., Jr. 4815 West Markham, Little Rock 72205, 661-2000
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Harris, W. Turner 500 South University, Little Rock 72205, 664-3914
Harrison, A. Vale 110 East 7th Street, Little Rock 72201, 374-3815
Harville, William E. 1700 West 13th Street, Little Rock 72201, 374-3351
Hawley, Harold B. Donaghey Building, Little Rock 72201, 375-4111
Hayden, William F. 500 South University, Little Rock 72205, 664-2434
Hayes, J. Harry, Jr. 500 South University, Little Rock 72205, 666-2811
Headstream, James W. 500 South University, Little Rock 72205, 664-4364
Hearnsberger, Henry G., Jr. 4313 West Markham, Little Rock 72205, 666-0181
Hedges, Harold H. 814 North University, Little Rock 72205, 663-9474
Hefley, Bill F. 4001 West Capitol, Little Rock 72205, 664-1596
Henker, Fred O., III 4301 West Markham, Little Rock 72205, 664-5000
Henry, Charles R. 500 South University, Little Rock 72205, 664-4191
Henry, G. Morrison 400 Pershing Blvd., North Little Rock 72114, 664-3600
Henry, J. Forrest, Jr. 516 Scott, Little Rock 72201, 374-6338
Henry, Robert L., Jr. 6213 Lee Avenue, Little Rock 72205, 664-4044
Herron, John T. 4815 West Markham, Little Rock 72205, 661-2000
Hickey, Joseph P. University Tower Bldg., Little Rock 72204, 664-2496
Holitik, George F. 3200 Bryant, Little Rock 72204, 562-5556
Hollenberg, Henry G. 500 South University, Little Rock 72205, 664-4747
Hollis, N. T. 4115 West 16th Street, Little Rock 72204, 664-3926
*Holmes, Glen M. Little Rock
Holmes, Harlan C. 1120 Marshall, Little Rock 72202, 372-5040
Holt, L. Gordon 5324 West Markham, Little Rock 72205, 666-9442
Honeycutt, Thomas D. 4124 West 11th St., Little Rock 72204, 664-4389
Honeycutt, W. Mage 500 South University, Little Rock 72205, 664-4161
Hoover, Paul W. 1120 Marshall, Little Rock 72202, 374-0789
Howard, John G., Jr. 500 South University, Little Rock 72205, 663-1120
Hudgins, Paul T. 1120 Marshall, Little Rock 72202, 372-7502
Hundley, John M. 412 Cross, Little Rock 72201, 375-5338
Hunter, Robert W. 1700 West 13th St., Little Rock 72201, 374-3351
Hutson, Harold G. 1000 Wolfe, Little Rock 72202, 375-2446
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Jackson, George W. 4313 West Markham, Little Rock 72205, 666-0181
Jackson, Morris A. 1304 Wright Avenue, Little Rock 72206, 374-7940
Jansen, G. Thomas 500 South University, Little Rock 72205, 664-4161
Johnson, Henry D. 500 South University, Little Rock 72205, 664-4171
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Jones, Jerry G. 1210 Look Street, Little Rock 72204, 666-0326
Jones, Kenneth G. P. O. Box 7117, Little Rock 72205, 666-9491
Jones, Robert D. 500 South University, Little Rock 72205, 664-4747
Jones, William N. 500 South University, Little Rock 72205, 664-0418
Jordan, William K. 500 South University, Little Rock 72205, 663-6353
Jouett, W. Ray Donaghey Building, Little Rock 72201, 375-5547
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Juniper, Kerrison, Jr. 4301 West Markham, Little Rock 72205, 664-5000
Junkin, Ruth 5321 John F. Kennedy Blvd., North Little Rock 72116 NF
Kagy, John K. 8609-F West Markham, Little Rock 72205, 225-2591
Kahn, Alfred, Jr. 1300 West 6th Street, Little Rock 72201, 374-5589
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Kennedy, Charles H. 3115 John F. Kennedy Blvd., North Little Rock 72116, 753-9464
Kennedy, H. Frazier 500 South University, Little Rock 72205, 664-4117
Kilbury, M. J., Jr. 500 South University, Little Rock 72205, 664-1322
Kilbury, M. J., Sr. 6109 Greenwood Road, Little Rock 72207 (Res.) 663-5213
Kirby, Jesse M. 6924 Baucum Pike, North Little Rock 72117 (Res.) 945-3055
Kittler, Frederick J. 4001 West Capitol, Little Rock 72205, 664-1596
Kolb, Agnes 1612 Maryland, Little Rock 72202, 372-3491
Kolb, W. Payton 1120 Marshall, Little Rock 72202, 372-3325
Kozberg, Oscar 4313 West Markham, Little Rock 72205, 666-0181
Kreth, K. M. 5800 West Markham, Little Rock 72205, 663-9441
Kumpuris, Frank G. 415 North University, Little Rock 72205, 664-1521
Kustermann, Stuart D. 4301 West Markham, Little Rock 72205, 664-5000
Kuykendall, Sam J. 500 South University, Little Rock 72205, 664-2736
Kyser, James F. 4942 West Markham, Little Rock 72205, 663-9423
Lamb, William A. 4001 West 11th, Little Rock 72204 (Res.) 663-1452
Lane, John W. 1612 Maryland, Little Rock 72202, 374-3351
Langston, Harold D. 1612 Maryland, Little Rock 72202, 374-3351
Laurens, John 501 North University, Little Rock 72205, 664-0390

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Ledbetter, Charles .....4301 West Markham, Little Rock 72205, 664-5000
Lee, J. Fred ..... 5326 West Markham, Little Rock 72205, 664-3904
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Lester, Joe K. .....151B Main, North Little Rock 72114, 37S-0102
Levy, Jerome S. .....500 South University, Little Rock 72205, 664-4181
Lewis, W. Sexton .....900 North University, Little Rock 72207, 664-3600
Lincoln, Ben M. .....5322 West Markham, Little Rock 72205, 663-9433
Logan, Charles W. .....500 South University, Little Rock 72205, 664-4364
Logue, Richard M. .....601 North University, Little Rock 72205, 666-0144
Longstreth, Alvin E. .....1312 Fair Park, Little Rock 72204 (Res.) 663-5545
Lucas, George J. .. 300 East Roosevelt Road, Little Rock 72206, 372-B361
Lucy, Dennis D., Jr. .....4301 West Markham, Little Rock 72205, 664-5000
Ludwig, Frank R. ..406 Pershing Blvd., North Little Rock 72114, 75B-1620
McCaskill, Melvin R. ..500 South University, Little Rock 72205, 664-4131
McClain, Monroe D. .....1120 Marshall, Little Rock 72202, 374-74B4
McClintock, Everett M. ..... 712 University Tower Bldg., Little Rock 72204, 664-04B0
McConnell, J. D. ..... 4301 West Markham, Little Rock 72205, 664-5000
McCracken, John D. ....5512 West Markham, Little Rock 72205, 664-1000
McCrary, George A. .....112 North Bailey, Jacksonville 72076, 9B2-2125
McGinnis, Max R. .....500 South University, Little Rock 72205, 664-4131
McGrew, Robert N. .....4301 West Markham, Little Rock 72205, 664-5000
McKenzie, Charles N. ..802 North University, Little Rock 72205, 666-0251
McKenzie, James G. ....4301 West Markham, Little Rock 72205, 664-5000
McKnight, C. Allen .....5805 West 12th, Little Rock 72204, 666-0292
McMillin, Lamar .....1311 Louisiana, Little Rock 72202, 374-6S31
McMillion, Stephen D. ....1B00 Maple, North Little Rock 72114, 75B-1450
McPhail, Jasper L. .....1624 Maryland, Little Rock 72202, 375-3747
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Miles, David A. ..University Tower Building, Little Rock 72204, 664-301B
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Miller, Forrest 8., Jr. .....3500 South University, Little Rock 72204, 562-4838
Miller, Harold N. ..... Port Charlotte, Florida
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Mitchell, George K. .....P. O. Box 21B1, Little Rock 72203, 374-7401
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Molholm, Hans 8. ..... Donaghey Building, Little Rock 72201, 372-340B
Moore, Jim J. .....500 South University, Little Rock 72205, 666-5466
Moore, J. Malcolm, Jr. 500 South University, Little Rock 72205, 664-4364
Moore, Rex N. .....P. O. Box 306, Jacksonville 72076, 9B2-2141
Morgan, Frank E. .....410 Pershing Blvd., No. Little Rock 72114, 75B-1022
Morris, Woodbridge E..5324 West Markham, Little Rock 72205, 664-2111
Morrison, James R. . 500 South University, Little Rock 72205, 664-3914
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Murphy, Randolph .....4313 West Markham, Little Rock 72205, 666-0181
Napper, George S. .....513 Main, North Little Rock 72114, 375-2433
Newbern, David H. .....500 South University, Little Rock 72205, 664-3914
Nisbett, James M. ..... 517 East 7th, Little Rock 72202 (Res.) 375-2252
Nixon, Ewing M. .....1000 Wolfe, Little Rock 72202, 37S-2446
Norton, Joseph A. .....500 South University, Little Rock 72205, 664-3914
Ogden, Mahlon D. .....4601 Woodlawn, Little Rock 72205, 664-0769
Oglesby, Walter R. ..324 Pershing Blvd., No. Little Rock 72114, 753-51B0
O'Neal, Walter H. .....1111 Bishop, Little Rock 72202, 37S-1177
Orr, William S., Jr. .....500 South University, Little Rock 72205, 664-3043
Packmore, D. E. ..... Donaghey Building, Little Rock 72201, 372-3B22
Padberg, Frank T. .....500 South University, Little Rock 72205, 666-5466
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Pappas, James J. .....1610 West 3rd, Little Rock 72201, 376-3651
Peacock, Loverd M. .....4301 West Markham, Little Rock 72205, 664-5000
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Pehrson, Nils C. .....500 South University, Little Rock 72205, 666-0381
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Phillips, Bert L. .....1403 Main, North Little Rock 72114, 376-2840
Phillips, Samuel .....Donaghey Building, Little Rock 72201, 374-9534
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Pike, John D. .....500 South University, Little Rock 72205, 664-4321
Pollard, Arlee E. .....St. Vincent Inf., Little Rock 72201, 661-3635
Pool, Chalmers S. ..... VA Hospital, North Little Rock 72114, 372-8361
Porter. James O., Jr. ....500 South University, Little Rock 72205, 664-383B
Price, Ben O. .....500 South University, Little Rock 72205, 664-4166
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Purdy, Harold D. . 6924 Geyer Springs Road, Little Rock 72209, 562-1463
Quimby, Charles W., Jr. . 4301 W. Markham, Little Rock 72205, 664-5000
Quittner, Howard .....4301 West Markham, Little Rock 72205, 664-5000
Ramsay, Reginald C., Jr. 4B15 W. Markham, Little Rock 72205, 661-2000
Rasch, James R. ..... 900 North University, Little Rock 72207, 664-3600
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Reaves Bennett J. . . ..4815 West Markham, Little Rock 72205, 661-2000
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Reese, William G. .....4301 West Markham, Little Rock 72205, 664-S000
Regnier, George G. ....S00 South University, Little Rock 72205, 664-3914
Rhinehart. William J. Donaghey Building, Little Rock 72201, 376-1321
Richardson, Robert E. ...500 South University, Little Rock 72205, 664-4321
Richmond, Samuel V. . Donaghey Building, Little Rock 72201, 372-5101
Riegler, Nicholas W., Jr. .....1024 Scott, Little Rock 72202, 375-3326
Riegler, Nicholas W., Sr. .....1024 Scott, Little Rock 72202, 375-3326
Riggs. Orval E. .....4301 West Markham, Little Rock 72205, 664-5000
Riley, William H. .....3500 South University, Little Rock 72204, S62-4838
Ritchie, Elmer J. .....1401 Main, North Little Rock 72114, 372-5253
*Robinson, J. M. .....Little Rock
Rodgers, C. Dudley .... 500 South University, Little Rock 72205, 664-4131
Rodgers, Clyde D. .....500 South University, Little Rock 7220S, 664-4131
Rooney, Thomas P. ..... 412 Cross, Little Rock 72201, 375-533B
Rosenbaum, Carl A. ..... Donaghey Building, Little Rock 72201, 372-S101
Ross, Ashley S., Jr. .....500 South University, Little Rock 72205, 664-1222
Ross, Robert W. ..... 4316 West Markham, Little Rock 72205, 664-2585
Ross, S. William .....900 North University, Little Rock 72207, 664-3600
Rothert, Frances C. .....Guatemala City, Guatemala, NF
Rozzell, Allen R. ..... .500 South University, Little Rock 72205, 664-3043
Rucker, George D. .....Shreveport, Louisiana
Runnels, Gathel O. ..... 4313 West Markham, Little Rock 72205, 666-0181
Safely, Charles F., Jr....4301 West Markham, Little Rock 72205, 664-5000
Samuel, John M. .....5812 West Markham, Little Rock 72205, 664-1544
Sanderlin, Joseph H. .....Donaghey 8uilding, Little Rock 72201, 37S-722B
Satterfield, John V. .....500 South University, Little Rock 72205, 666-S488
Schneider, Mildred F. ....VA Hospital, North Little Rock 72114, 372-B361
Schratz, Bruce E. .....1801 Maple, North Little Rock 72114, 75B-1002
Schultz, John C. .....900 North University, Little Rock 72207, 664-3600
Schwander, Howard .....1115 Bishop, Little Rock 72202, 375-2366
Schwarz, W. J. .....Donaghey Building, Little Rock 72201, 374-4712
Scruggs, Joe B., Jr. .....1612 Maryland, Little Rock 72202, 374-3351
Selakovich, Walter G. ..500 South University, Little Rock 72205, 666-2824
Sessoms, William D. .....1120 Marshall, Little Rock 72202, 374-9568
Shannon, Robert F. .....1201 Bishop, Little Rock 72202, 374-7467
Shorey, Winston K. .....4301 West Markham, Little Rock 72205, 664-S000
Shuffield, H. Elvin (Secretary)....1000 Wolfe, Little Rock 72202, 375-2446
Silverblatt, Charles W. .....500 University Tower Bldg., Little Rock 72204, 664-5253
Simmons, Orman W. .....1120 Marshall, Little Rock 72202, 372-2125
Simpson, N. Henry, Jr... Donaghey 8uilding, Little Rock 72201, 375-2B01
Sipes, Frank M. .....Donaghey Building, Little Rock 72201, 375-S543
Sloan, James M. .....500 South University, Little Rock 72205, 664-3838
Smith, Aubrey C. .....1201 Bishop, Little Rock 72202, 374-7467
Smith, Huie H. .....1S17 Main, North Little Rock 72114, 374-7011
Smith, James L. .....623 Woodlane, Little Rock 72201, 374-6491
Smith, John McC. .....4000 Woodlawn, Little Rock 72205, 666-6570
Smith, John W. .....1415 West 6th, Little Rock 72201, 374-1622
Smith, Mose, III .....5324 West Markham, Little Rock 72205, 664-1527
Smith, Purcell, Jr. .....4001 West Capitol, Little Rock 72205, 664-1596
Smith, Thomas J. .....S606 West Markham, Little Rock 72205, 664-69B0
Smith, Thomas W. .....500 South University, Little Rock 72205, 664-4117
Smith, W. Myers .....3423 Pike Street, North Little Rock 7211B, 7S3-3661
Smoot, William H. .....500 South University, Little Rock 72205, 664-4161
Snodgrass, W. A., Jr. .....8A Quapaw Tower Apts., Little Rock 72202 (Res.) 375-8463
Sorrells, R. Barry .....P. O. Box 7117, Little Rock 72205, 666-9491
Spitzberg, Irving J. .....Donaghey Building, Little Rock 72201, 372-3670
Springer, Worthie R., Jr.....103 East 2nd, No. Little Rock 72114, 374-2635
Stainton, Robert M. .....500 South University, Little Rock 72205, 664-4175
Stanley Joe P. .....Pike Plaza Center, North Little Rock 72114, 376-4023
Stathakis, John M .....VA Hospital, North Little Rock 72114, 372-8361
Steele, William L. .....5520 West Markham, Little Rock 72205, 666-9431
Stephens, Wanda J. .....12A Quapaw Tower Apts. Little Rock 72202, 372-299B
Stewart, Bill D. .....415 North University, Little Rock 72205, 664-1S21
Stotts, John R. ..... 5905 "R" Street, Little Rock 72207, 663-9415
Strauss, Alvin W., Jr. .....110 East 7th, Little Rock 72201, 372-1828
Stroope, George F. .... 516 Pershing, North Little Rock 72114, 75B-1S30
Stuckey, James G., Jr. ..500 South University, Little Rock 72205, 664-4383
Sundermann, Richard H. 4301 W. Markham, Little Rock 7220S, 664-5000
Swindoll, Bryant S. ..... 4815 West Markham, Little Rock 72205, 661-2000
Taylor, Eugene H. .....900 North University, Little Rock 72207, 664-3600
Taylor, James S. . Rivercliff Apts., 500, Little Rock 72202 (Res.) 664-2005
Teeter, John A. .....5804 West Markham, Little Rock 72205, 664-1767
Thomas, Jerry L. . . .. 4301 West Markham, Little Rock 72205, 664-5000
Thomas, Peter O. .....1310 Cantrell Road, Little Rock 72201, 374-5703
Thomas, Philip E. .....418 Hall Building, Little Rock 72201, 372-3829
Thompson, Bernard W. . 4301 West Markham, Little Rock 72205, 664-5000
Thompson, Lawrence L. . 1310 Cantrell Road, Little Rock 72201, 375-S3B1
Thompson, Robert M. .....University Tower Building, Little Rock 72204, 664-2444
Thompson, Samuel B. ....5520 West Markham, Little Rock 72205, 666-9431
Thorn, G. Max .....St. Vincent Inf., Little Rock 72201, 661-3000
Tolbert, Louis E., Jr. ....500 South University. Little Rock 7220S, 666-0136
Tudor John M., Jr. ....5801 West Markham, Little Rock 72205, 663-B461
Valentine, Robert G. ....1320 Marshall, Little Rock 72202, 374-9568
Vaughter, W. Roger ..... 1120 Marshall, Little Rock 72202, 374-9568
Wade, William I., Jr. . 814 North University, Little Rock 72205, 663-9474
Wallace, Deane D. .....500 South University, Little Rock 72205, 664-4377
Wallis, Charles .....5909 Country Club, Little Rock 72207 (Res.) 663-2132
Walt, James R. .....500 South University, Little Rock 72205, 664-4146
Ward, Joseph P. .....1120 Marshall, Little Rock 72202, 372-7502
Warford, Lloyd R. ..... 6213 Lee Avenue, Little Rock 72205, 664-4044
Warford, Walton R. . . VA Hospital, North Little Rock 72114, 372-B361
Washburn, Arthur M. . .....S10 Brookside Drive, Little Rock 72205 (Res.) 225-5132
Watkins, John G., Jr. ... Donaghey Building, Little Rock 72201, 372-7026
Watson, C. Fletcher ..... 106 South Maple, Little Rock 72205 (Res.) NF
Watson, Robert ....Donaghey Building, Little Rock 72201, 375-5547
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Weber, James R. .....1110 West Main, Jacksonville 72076, 9B2-2108
Wells, Travis L. .....Donaghey Building, Little Rock 72201, 375-7121
Wenger, Carl E. .....1624 Maryland, Little Rock 72202, 374-2272
Westerfield, Frank M., Jr. .....1120 Marshall, Little Rock 72202, 374-647B
White, Oba B. .....Century Bulding, Little Rock 72201, 374-3609
Whitehead, Robert H., Jr. ..Donaghey Bldg., Little Rock 72201, 372-2960
Wilbur, E. Lloyd .....1700 West 13th, Little Rock 72201, 374-3351
Wilkes, Elbert H. .....5322 West Markham, Little Rock 72205, 663-4114
Williams, G. Doyne, Jr. . .4301 W. Markham, Little Rock 72205, 664-S000
Wilson, George E., Jr. .....St. Vincent Inf., Little Rock 72201, 661-3635
Wilson, James W. . . 500 South University, Little Rock 72205, 664-4166
Wilson, John L. .....601 North University, Little Rock 72205, 666-0144
Winn, Charles R., Jr. .....1009 Wolfe, Little Rock 72202, 375-5154
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Zell, Lawrence M. .....Donaghey Bulding, Little Rock 72201, 374-5158

RANDOLPH COUNTY

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Smith, Norman K. ....10B Van Bibber, Pocahontas 72455, B92-33B9
Wyllie, James J. . .....309 West Broadway, Pocahontas 72455, B92-5100

SALINE COUNTY

Ashby, John W. .....302 West South, Benton 72015, 778-4511
Baber, Quin M. .....212 West Sevier, Benton 72015, 778-3844
Bethel, James C. ..... 221 East Sevier, Benton 72015, 778-33B2
Hogue, F. Paul .....302 West South, Benton 72015, 778-4511
Hood, Robert H. .....Arkansas State Hospital, Benton 72015, 778-1111
Jones, Curtis W., Jr. .....223 South Market, Benton 72015, 778-2722
Jones, Curtis W., Sr. ..... 223 South Market, Benton 72015, 778-2722
Jones, Robert E. .... 225 South Market, Benton 72015, 778-360B
Kirk, Marvin N., Jr. ..... P. O. Box 399, Benton 72015, 778-B264
McDaniel, Thomas W., Jr. .....Arkansas State Hospital, State Hospital 72158, 778-1111
McNichol, Ronald W.....Arkansas State Hospital, Benton 72015, 778-1111
Martindale, J. L. ....323 Short, Benton 72015, 778-1124
Mizell, Walter S. ..... Arkansas State Hospital, Benton 72015, 778-1111
Simmons, Michael D. ....P. O. Box 65, Bryant 72022, B47-0289
Thompson, John P. ..... .Arkansas State Hospital, Benton 72015, 778-1111
Thorn, H. B., Jr. .. ..302 West South, Benton 72015, 778-4511
Viner, Donald L. .. ..212 West Sevier, Benton 72015, 778-1513
Walton, Charles R. ....Montgomery, Alabama
Wright, John D. ....321 Short, Benton 72015, 778-1119

SCOTT COUNTY

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Wright, Harold B. .....P. O. Box 249, Waldron 72958, 637-3111

SEARCY COUNTY

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Broadwater, John R. .....1500 Dodson, Fort Smith 72901, 782-4092
Brooksher, William R. .....P. O. Box 3096, Fort Smith 72901, 783-4803
Brown, Byron L. .....300 North Greenwood, Fort Smith 72901, 783-3604
Brown, James A. ..... 2702 Barry Avenue, Fort Smith 72901, 785-2636
Buie, James H. .....1500 Dodson, Fort Smith 72901, 782-4092
Cabell, Ben B. .....312 South 16th, Fort Smith 72901, 782-7921
Carter, Sarah A. .....1500 Dodson, Fort Smith 72901, 782-4092
Cassady, Calvin R. .....1500 Dodson, Fort Smith 72901, 782-4092
Chambers, Donald S. .....91B Lexington, Fort Smith 72901, 785-1428
Chamblin, Don W. .....1500 Dodson, Fort Smith 72901, 782-4092
Clemmons, Edward E. .....100 South 14th, Fort Smith 72901, 783-1183
Coffman, Edwin L. .....1500 Dodson, Fort Smith 72901, 782-4092
Crigler, Ralph E. .....1500 Dodson, Fort Smith 72901, 782-4092
Crow, Neil E. .....1500 Dodson, Fort Smith 72901, 782-4092
Darnall, Harley C. ..211-D North Greenwood, Fort Smith 72901, 782-8667
Davenport, O. Leo ....922 Lexington, Fort Smith 72901, 785-1447
Dupont, John L. .....1500 Dodson, Fort Smith 72901, 782-4092
Ellis, Homer G. .....314 North Greenwood, Fort Smith 72901, 785-2661
Faier, Samuel Z. .....1500 Dodson, Fort Smith 72901, 782-4092
Feder, Frederick P., Jr. .....1400 South "D", Fort Smith 72901, 785-2604
Feild, T. A., III .....3600 North "O", Fort Smith 72901, 783-5158
Floyd, Charles H. .....617 South 16th, Fort Smith 72901, 783-3165
Foltz, Thomas P. . .....2710 Lela, Fort Smith 72901 (Res.) 783-8218
Gedosh, Edgar A. .....600 South 16th, Fort Smith 72901, 782-6022
Gill, James A. ....1500 Dodson, Fort Smith 72901, 782-4092
Girkin, R. Gene .. ..922 Lexington, Fort Smith 72901, 785-1447
Goldstein, D. W. ....100 South 14th, Fort Smith 72901, 783-1183
Goodman, Raymond C., Sr. .....1500 Dodson, Fort Smith 72901, 782-4092
Hall, Charles W...101 West Sycamore, Greenwood 72936 (Res.) 996-2947
Hathcock, Alfred B. .. . .1500 Dodson, Fort Smith 72901, 782-4092
Hawkins, Wright ....100 South 14th, Fort Smith 72901, 783-1183
Haynes, W. D. ..... 500 South University, Little Rock 72205, 664-3914
Henry, L. Murphey ....602 Garrison, Fort Smith 72901, 782-7261
Henry, Louise M. .....602 Garrison, Fort Smith 72901, 782-7261
Hewett, Archie L. .....1400 South "D", Fort Smith 72901, 785-2604
Hoge, Arthur F., Jr.....314 North Greenwood, Fort Smith 72901, 785-2661
Hoge, Marlin B. .....314 North Greenwood, Fort Smith 72901, 782-4066
Holmes, Williams C., Jr. .. ..100 South 14th, Fort Smith 72901, 783-1183
Hornberger, E. Z. .....P. O. Box 3006, Fort Smith 72901, 783-3159
Hughes, Robert P., Jr. .....1214 North "B", Fort Smith 72901, 782-8892
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Kelsey, J. F. ....P. O. Box 3007, Fort Smith 72901, 785-2411
Kennedy, Virgil N. .....5417 Grand Avenue, Fort Smith 72901, 452-2662
Kirkpatrick, Hoyt, Jr. .....1500 Dodson, Fort Smith 72901, 782-4092
Klopfenstein, Keith .....1500 Dodson, Fort Smith 72901, 782-4092
Knight, W. E. .....1500 Dodson, Fort Smith 72901, 782-4092
Koenig, Albert S. .....922 Lexington, Fort Smith 72901, 785-1447
Kramer, Ralph G. .....603 Lexington, Fort Smith 72901, 783-8917
Krock, Curtis J. .....1500 Dodson, Fort Smith 72901, 782-4092
Krock, Frederick H. .....1500 Dodson, Fort Smith 72901, 782-4092
Kutait, Kemal .....1120 Lexington, Fort Smith 72901, 785-2655
Lambiotte, Louis O. ....1500 Dodson, Fort Smith 72901, 782-4092
Landrum, Annette V. ....500 Lexington, Fort Smith 72901, 782-4983
Landrum, Samuel E. ..314 North Greenwood, Fort Smith 72901, 782-4066
Lane, Charles S., Jr. . . . . 600 South 16th, Fort Smith 72901, 782-6022
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Lilly, Kenneth E. .....1120 Lexington, Fort Smith 72901, 785-2655
Lockhart, William G. .....1500 Dodson, Fort Smith 72901, 782-4092
Lockwood, Franklin M. .....1500 Dodson, Fort Smith 72901, 782-4092
McCraney, Holden C. ..... 217 Lexington, Fort Smith 72901, 783-0297
McDonald, H. P. .....2044 North 29th, Fort Smith 72901, 782-4833
McEwen, Stanley R. .....1214 North "B", Fort Smith 72901, 782-8892
McMinimy, D. J. .....1500 Dodson, Fort Smith 72901, 782-4092
Martin, Art 8. .....1500 Dodson, Fort Smith 72901, 782-4092
Mason, Joe .....1500 Dodson, Fort Smith 72901, 782-4092
Meador, Don M. .....3600 North "O", Fort Smith 72901, 783-5158
Mendelsohn, Ernest A. .....1500 Dodson, Fort Smith 72901, 782-4092
Mings, Harold H. . . . .1500 Dodson, Fort Smith 72901, 782-4092
Moulton, Everett C., Jr. .. ..1214 North "B", Fort Smith 72901, 782-8892
Murchison, Roary A. . . ..P. O. Box 7, Lavaca 72941, 674-2801
Northum, Charles S. . .....1500 Dodson, Fort Smith 72901, 782-4092
Olson, John D. ....1500 Dodson, Fort Smith 72901, 782-4092
Parker, Joel E., Jr. . . . 617 South 16th, Fort Smith 72901, 783-3165
Parta, H. John .. ..3120 Jenny Lind, Fort Smith 72901, 646-7895
Patton, Gerald K. .. . .100 North 16th, Fort Smith 72901, 782-5063
Pence, Eldon D. .. . . 320 North Greenwood, Fort Smith 72901, 782-3001
Phillips, William P. ....P. O. Box 3007, Fort Smith 72901, 785-2411
Pillstrom, Lawrence G. . .... . 1120 Lexington, Fort Smith 72901, 785-2655
Poe, McDonald, Jr. . 320 North Greenwood, Fort Smith 72901, 782-3001
Post, James M. .... 617 South 16th, Fort Smith 72901, 783-3165
Prewitt, Taylor A. ... .100 South 14th, Fort Smith 72901, 783-11B3
Price, Lawrence C. . . ..P. O. Box 3006, Fort Smith 72901, 783-3159
Raymond, Thomas H. .. . . .600 South 16th, Fort Smith 72901, 782-6022
Rogers, Paul L. .... .P. O. Box 3096, Fort Smith 72901, 783-4803
Saviers, Boyd M. .... 1500 Dodson, Fort Smith 72901, 782-4092
Schirmer, Roy E. ....1420 South "I", Fort Smith 72901, 782-29B3
Scott, M. H. .. ..512 North 39th, Fort Smith 72901 (Res.) NF
Sherman, Robert L. .. ..P. O. Box 3007, Fort Smith 72901, 785-2411
Shermer, J. P. .... 623 South 21st, Fort Smith 72901, 783-1520
Shippey, William L. ....612 South 24th, Fort Smith 72901, 783-7227
Simpson, John D. .... Louisville, Kentucky
Sims, Henry M. .....60B North Greenwood, Fort Smith 72901, 783-4303
Smith, Douglas B. .... P. O. Box 3007, Fort Smith 72901, 785-2411
Snider, James R. .... .1500 Dodson, Fort Smith 72901, 782-4092
Stanton, William B. . 300 North Greenwood, Fort Smith 72901, 783-0225
Stewart, John B. .... 603 Lexington, Fort Smith 72901, 783-8917
Swena, Richard R. .... 1322 North "B", Fort Smith 72901, 785-2426
Thompson, James B. .... 605 Lexington, Fort Smith 72901, 782-6081
Thompson, Kenneth .... .100 South 14th, Fort Smith 72901, 783-11B3
Thompson, Robert J. .... 605 Lexington, Fort Smith 72901, 782-6081
Turner, William F. .....1500 Dodson, Fort Smith 72901, 782-4092
Wahman, Gerald E. .....1500 Dodson, Fort Smith 72901, 782-4092
Watts, John C., Jr. .. ..500 South 16th, Fort Smith 72901, 783-0211
Westermann, Norman F. .....1500 Dodson, Fort Smith 72901, 782-4092
Whitaker, Thomas J., Jr. . . . 1823 Dodson, Fort Smith 72901, 782-4929
White, J. Earle ..... 320 North Greenwood, Fort Smith 72901, 782-3001
Whittaker, L. A. . . . . 708 Lexington, Fort Smith 72901, 785-2801
Wideman, John W. 300 North Greenwood, Fort Smith 72901, 783-0225
Williams, Carl L. . . .... .522 South 16th, Fort Smith 72901, 785-1413
Wilson, Carl L. .. . . 1500 Dodson, Fort Smith 72901, 782-4092
Wilson, Morton C. .. . . . 1500 Dodson, Fort Smith 72901, 782-4092
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Dickinson, R. C. . .. . 302 North 4th, DeQueen 71832, 584-2344
Dickinson, Richard B. ..... . 302 North 4th, DeQueen 71832, 584-2344
Dickinson, Rodger C. .... 302 North 4th, DeQueen 71832, 584-2344
Jones, Charles N. .. .. Highway 70 West, DeQueen 71832, 584-2022
Joseph, Eugene A. .. .. .. Highway 70 West, DeQueen 71832, 584-2022
Pullen, Wayne G. .... Highway 70 West, DeQueen 71832, 584-2022
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Crawley, Charles E. ....328 Kittel Road, Forrest City 72335, 633-1425
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Laney, John N. .... .325 North Washington, Forrest City 72335, 633-4711
McPhail, George T. . ... Box 989, Forrest City 72335, 633-1952
Roy, J. Max ..... 317 North Washington, Forrest City 72335, 633-4133
Saliba, Norman R. .. . . .515 West Lee, Osceola 72370, 563-5279
Sexton, Giles A. .... 328 Kittel Road, Forrest City 72335, 633-1425

UNION COUNTY

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Cathey, A. D. .....112 West Peach, El Dorado 71730, 863-4127
Clark, James F. .....524 West Faulkner, El Dorado 71730, 863-4267
Clowney, Albert R. .....312 Thompson, El Dorado 71730, 863-4101
Cullins, John G. .....1412 South Taylor, Little Rock 72204 (Res.) 663-8201
Cyphers, Charles D. .....519 West Faulkner, El Dorado 71730, 862-3471
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Elliott, Wayne G. ....443 West Oak, El Dorado 71730, 862-1351
Ellis, Jacob P. .... 714 West Faulkner, El Dorado 71730, 862-51B4
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Harper, John W. . ...425 West Oak, El Dorado 71730, 863-5135
Harrison, Margaret . .....514 West Faulkner, El Dorado 71730, 862-4994
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Henley, Paul G. .. . . 700 West Faulkner, El Dorado 71730, 863-9542
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Jameson, Sam G. .... 532 West Faulkner, El Dorado 71730, 862-6852
Jones, R. J. ....814 Cobb, Jonesboro 72401, 935-9788
King, 8. D. .... .460 West Oak, El Dorado 71730, 863-3161
Landers, Gardner H. . . . 318 Thompson, El Dorado 71730, 862-4216
Lewis, Ronald M. .. . . 427 West Oak, El Dorado 71730, 863-7294
McKinney, J. S. .... 514 West Faulkner, El Dorado 71730, 862-4994
Mayfield, Hugh J. . . . . 427 West Oak, El Dorado 71730, 863-7430
Moore, Berry L., Jr. . . . 615 West Grove, El Dorado 71730, 863-4185
Murphy, Garland D., Sr. ....Calion Highway, El Dorado 71730 (Res.) NF

Pinson, J. H., Jr. 312 Thompson, El Dorado 71730, 863-4101
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Evaluation of the Patient With Dizziness

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The incidence of dizziness as a complaint in general medical practice has been quoted reliably to be approximately five percent. In specialized practices, such as otolaryngology and neurology, the figures range from 10-15 percent. All physicians, irrespective of their field of medicine, should be familiar with the most common causes of dizziness and also should be capable of initiating the differentiation between organic vestibular disorders and the large waste basket of complaints of imbalance that may be the result of difficulties in other systems.

The correct anatomic diagnosis must be made if patients are to have the benefit of adequate treatment. The majority of organic disorders of the balance mechanism have their origin in the vestibular end organ and its nerve pathways. The differentiation of peripheral from central vestibular disorders is important, but it is equally important to be able to differentiate true vestibular disorders from disturbances in other systems. In order to differentiate the normal from the abnormal and the peripheral from the central disorders it is important to follow some prescribed sequential format of evaluation. A convenient format is the following: (1) History, (2) General physical examination, (3) Otolaryngologic evaluation, (4) Audiologic evaluation, (5) Radiographic evaluation, (6) Vestibular evaluation with and without electronystagmography.

History

The physician should encourage the patient to describe his experiences with regard to vertigo in minute detail. Seemingly unimportant incidents or details could be significant in suggesting the underlying cause of the vertigo. It is most important for the patient to describe the sensation of which he complains. All patients will more than likely use the word dizziness but this word may mean different things to different people. The patient should be encouraged to compare or describe his feeling to that of his surroundings whirling, those of whirling sensation within himself, the feeling of unsteadiness or faintness, or to any other sensation that he may be able to describe. It is important to ascertain whether the vertigo is episodic or continuous and whether the vertigo occurs when the patient changes to a sitting or a standing position or is the result of any other specific change of head position.

A general medical history of previous evaluations is important. Have there been hormonal, metabolic, allergic, cardiovascular or other problems that would relate to disrupted homeostatic mechanisms within the body? A history of surgical procedures, such as thyroidectomy, hysterectomy or removal of other organs are important because they might be involved in the maintenance of hormonal homeostasis and thus might be incriminated in altered water metabolism and sodium potassium metabolism and other metabolic problems.

A history of previous ingestion of alcohol, aspirin, birth control pills, sedatives or tranquilizers, is important. The presence of volatile toxins in the home or work environment can also be significant. A careful history, as to recent illnesses, particularly of viral infection or of accidents such as whiplash or head trauma can be important. It is also important to establish whether situations resulting in stress have occurred at home, school, or work. These stresses can cause neurovegetative responses which could result in vestibular symptomatology.

Other pertinent questions that relate specifically to the ear are of course important. Is there ear fullness, hearing loss, ringing in the ear, ear drainage, or any other localizing ear sign? If these are present then, of course, the middle and inner ear would be suspect.

Causes of Vertigo

Diagnoses in medicine are made because the physician suspects a clinical etiology. Certain common conditions produce peripheral and cen-

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tral vertigo and these should be considered initially. Vertigo is usually a result of a disturbance in either the vestibular, neurologic, cardiovascular, or ocular systems.

1. Otologic diseases producing vertigo are Meniere's disease, benign postural vertigo, acute and chronic ear infections (of the middle ear, mastoid, or inner ear), labyrinthine disorders due to trauma or congenital defects, vestibular neuronitis, occlusion of the Eustachian tube, or, unusually, cerumen in the external ear canal.

2. Neurologic diseases producing vertigo are multiple sclerosis, ischemia due to vascular insufficiency syndromes, head trauma, acoustic neurinoma, epilepsy (particularly of the temporal lobe), migraine, cerebral or cerebellar tumors, and increased intracranial pressure from any cause.

3. Cardiovascular diseases which may produce symptoms of dizziness are arrythmia, embolism, postural hypotension, and systemic hypotension. These disorders may produce vertigo as a manifestation of circulatory insufficiency or ischemia.

4. Ocular disorders may rarely be responsible for vertigo. Such disorders are usually readily detectable and a complete eye examination is seldom necessary. Abnormalities of the dioptic apparatus can result in dizziness if the lenses are strong and the patient is wearing glasses for the first time. Chronic imbalance of the extraocular muscle function usually does not cause vertigo. However, a sudden onset of paralysis of an extraocular muscle with associated diplopia may cause vertigo at first but the vertigo rarely persists.

Physical Examination

Other than the routine physical examination for general physical abnormalities, the two assessments that are a must are those of blood pressure and assessment of the optic discs. The blood pressure should be checked with the patient in a number of different positions and the optic discs should both be checked for choking, A-V nicking, and other blood vessel abnormalities.

Otolaryngologic Evaluation

Of primary concern in the ENT evaluation is a careful assessment of the ear canals, tympanic membranes, and middle ear. Impacted cerumen which is completely obstructive and impinges on the tympanic membrane, and consequently on the ossicular chain, can be a cause of vertigo. This, of course, can be easily recognized and solved and should be no problem. Inspection of the tympanic membrane for the signs of tubotympanitis and secretory otitis media also is of significance because they can cause dizziness when the middle ear is filled with fluid. This filling of the middle ear can mass-load the stapes in the oval window area and cause dizziness. This, however, is an unusual cause of dizziness.

Careful inspection, primarily of the upper portion of the tympanic membrane (Shrapnell's area), to determine the presence of a small perforation indicating a cholesteatoma is of importance. Cholesteatomas by pressure necrosis can invade the semicircular canal system and cause end organ dizziness. This is the commonly known fistula of the horizontal semicircular canal.

Neurologic Evaluation

A neurologic evaluation which includes a check of cranial nerves, gait, Romberg, and cerebellar functions should be done.

Cranial Nerve Evaluation

Examination for the function of the first cranial nerve (olfactory) is not ordinarily done except by history. Examination for the second cranial nerve is based on the examination of the optic discs and of the visual acuity. Examination for cranial nerves three, four, and six is accomplished by evaluating all directions of the patient's ocular motility.

The sensory division of the fifth cranial nerve is evaluated by testing the corneal reflex. In addition, cutaneous sensation for the fifth cranial nerve is evaluated by pin prick of the skin on both sides of the face. The motor division of the fifth cranial nerve is examined by evaluating the chin drop with the mouth open. If there is paralysis of the fifth nerve motor division the chin will drop to one side or the other.

The motor division of the seventh cranial nerve is tested in the usual fashion for evaluating the motor function of the main divisions, the frontal, the ocular, and the lip or mandibular branches. The eyes can be examined for evidence of decreased lacrimation and the tongue can be evaluated for taste disturbances. Taste evaluation can be accomplished by testing for sweet, sour, salt, and bitter with the use of sugar, vinegar, table salt, and quinine respectively.

The ninth cranial nerve is tested by evaluating the palatal and pharyngeal reflexes. These reflexes involve afferent sensations through the ninth nerve and motor response through the tenth cranial nerve. Palatal reflexes are elicited by stroking the soft palate near the uvula and ob-

serving for equal elevation of the soft palate. The pharyngeal gag reflexes are elicited by stroking each side of the posterior pharyngeal wall.

Evaluation of the function of the tenth cranial nerve involves the movement of the palate, the motion of the vocal cords, and the pharyngeal reflexes that have already been discussed.

Evaluation of the function of the eleventh cranial nerve is performed by evaluating the function of the sternocleidomastoid muscles. This is performed by having the examiner place one hand on each side of the patient's head and asking the patient to keep his head perfectly straight and resist the attempt of the examiner to move his head.

The twelfth cranial nerve is evaluated by evaluating tongue motion and tongue position. When there is unilateral peripheral paralysis of the twelfth cranial nerve the tip of the tongue is pushed to the involved side by the stronger muscles on the healthy opposite side. The function of the twelfth cranial nerve is easily examined by asking the patient to open his mouth and protrude his tongue.

Gait

Gait is evaluated by asking the patient to walk naturally first with his eyes open and then with his eyes closed. Walking along a crack or line on the floor is a useful office procedure. The physician should also ask the patient to walk forward as well as backward at his normal pace and stride. Walking backward is exacting and imposes balance difficulty. In many cases an uncoordinated or ataxic manner of walking can indicate the presence of cerebellar disease. However, ataxia may be seen in the acute phase of unilateral labyrinthine disease. In checking gait it is important for the physician to note whether the actions are carried out accurately, smoothly, and without tremor or ataxia. Observations should also be made on the erectness of the patient's posture, his ability to gauge distance, and whether the swing of his arms is normal. Correct performance of these tests depends principally on the integrity of the cerebellum in its afferent and efferent pathways.

Romberg

The Romberg test is first performed with the patient's eyes open, standing erect, and with the feet side by side. If he is unsteady or falls, cerebellar or labyrinthine disease may be present. If he can maintain normal balance with the eyes open he is then asked to close his eyes. If the patient sways or falls when his eyes are closed there is disturbance or proprioception or absence of labyrinthine function on one or both sides. Closing the eyes eliminates the spacial judgment which is aided by vision. Eye closure thus results in two of the three mechanisms of balance becoming inoperable. The direction of fall with the Romberg test is not useful in localizing or lateralizing a lesion.

Cerebellar Function

The assessment of cerebellar function involves testing of coordination. The patient may be put in a sitting or standing position for the testing of the finger to nose test. With the eyes open and the arms extended the patient is asked to touch the tip of his nose with the index finger of one hand and then to re-extend the limb. After several successive performances of this maneuver he is asked to repeat it with the other hand. He then performs the same act with the eyes closed. In addition, the patient is asked to touch the tip of his nose with his index finger and to reach out and touch the finger of the physician with the eyes open. During the test the physician should change the position of his finger.

The physician should gradually move his own finger more quickly requiring the patient to respond with increasing rapidity. The patient should perform these acts with each hand separately.

The tests for rapidly alternating movements should then be done with the patient patting his thigh with the palm and then with the back of each hand and touching his fingers to his thumb one after another in rapid succession.

If the patient is unable to perform any of these acts of coordination smoothly or makes an incorrect or tardy response a lesion in the cerebellum should be suspected.

Nystagmus

Nystagmus is the only objective sign of vertigo. It is an involuntary repetitive movement of the eyeball. It may be in the horizontal, vertical, or rotary planes. Vertigo is almost always associated with nystagmus and it can be either spontaneous or induced.

Spontaneous Nystagmus

The examination for spontaneous nystagmus can be carried out with the patient seated in front of the examiner or supine on the examining table. The patient's head should be kept immobile and

the position of his eyes altered by having him follow the examiner's finger. Tests should begin with the finger no closer than eighteen inches in front of the patient's eyes. The finger is then moved laterally, not more than 30°, first to the right and then to the left. The test is completed by returning the finger to the original position and repeating the maneuver in an upward and downward direction.

The presence of spontaneous nystagmus confirms the presence of organic disease. Its absence, however, does not preclude such a diagnosis.

Positional Nystagmus

Tests for positional nystagmus are performed by having the patient seated on an examining table with his legs extended toward the foot of the table. The examiner holds the patient's head between his hands, turns the head to the right, and briskly lays him supine so that his head is about 30° below the horizontal. The patient's eyes are observed for induced nystagmus. The test is repeated with the head turned to the left and again in the straight-ahead position. Each position should be maintained for at least 60 seconds.

The nature of the nystagmus induced by positional testing may indicate whether the vertigo originates in the peripheral or central areas. If there is no nystagmus on positional testing the response is normal. Positional nystagmus of peripheral origin is usually intense and simulates the sensation described by the patient as his presenting complaint. Positional nystagmus of the central variety appears very quickly without any latency and continues at the same intensity as long as the position is maintained. There are rarely accompanying symptoms of vertigo with positional nystagmus of the central variety.

Optokinetic Nystagmus

This test is useful in assessing the possibility that vertigo may be due to neurologic disease. Optokinetic nystagmus is a normal phenomenon resulting from movement of the eyes as they momentarily follow one of a succession of moving objects and then return quickly to fix on the next object. This is repeated so that a series of jerky movements of the eyes occurs. The slow component of the movement of the eyes is in the direction of the moving object and the fast component is in the opposite direction.

The most commonly used stimulus is a rotating drum with vertical black and white stripes. However, a satisfactory optokinetic nystagmus can be produced by passing an ordinary tape measure before the patient's eyes. He is instructed to watch the numbers as they go by and to keep the head still as he watches the numbers.

In the normal patient optokinetic nystagmus is equal in direction and intensity in both horizontal meridians, left to right and right to left. In patients with visual field defects due to cerebral lesions the response is often absent when the stimulus approaches from the side of the defective field. Disorders of the brain stem also produce asymmetrical patterns.

Assessment of Hearing

Many disease processes will involve both hearing and equilibratory mechanisms because of the intimate anatomic relationship between the cochlear and vestibular portions of the inner ear and of the eighth cranial nerve. The assessment of hearing will then often give useful information regarding the site of a lesion, particularly with respect as to whether it is peripheral or central. In certain disorders, such as Meniere's disease and acoustic neurinoma, the auditory abnormality may be the initial or most prominent manifestation.

It must be emphasized that no single audiologic test should be considered diagnostic. The physician must evaluate all hearing tests in relation to each other, to the other tests, and, of course, to the symptoms of the patient. It is important to evaluate each ear separately, particularly when testing the patient's comprehension of the spoken word. This can be readily accomplished by masking the opposite ear with a noisemaker such as a Barany noisemaker.

Two of the simplest and most rapidly conducted office tests of hearing, the Weber Test and the Rinne Test, are carried out by the use of a tuning fork. These tests can be used to differentiate among (1) normal hearing; (2) hearing loss which is of the conductive type (middle ear or Eustachian tube in origin); or (3) hearing loss which is neurosensory (inner ear or eighth nerve) in origin. A magnesium alloy tuning fork with a frequency of 512 cycles per second (Hz) should be used for both the Weber and the Rinne Tests.

Weber Test (Lateralization Test)

After striking the fork, the base is placed on the center of the forehead. With normal hearing, or with equal amounts of loss in both ears (either conductive or neurosensory), the sound will be

heard equally well in the two ears. If there is a unilateral conductive loss the sound will be heard loudest in the deafened ear. If there is a nerve deafness the sound is heard loudest in the better hearing ear.

Rinne Test
(Air and Bone Conduction Comparison)

The normal hearing ear perceives sound via the ear canal (air conduction) better or longer or louder than by way of the mastoid process (bone conduction). After striking the tuning fork the base of the fork is placed on the mastoid process, then the tines are placed about one inch from the external meatus. This base and tine placement should be successively alternated. The patient is asked to state where the sound is heard louder or best.

If the sound is heard best when the base is placed on the mastoid process the likelihood of a conductive hearing loss exists. If a hearing loss exists, but is of a neurosensory variety, the sound will be heard best by way of air conduction as in a normal hearing person. The physician should always ask the patient whether or not he hears the bone-conducted sound in the ear being tested since sound can be conducted to the opposite ear by way of bone conduction, leading to an erroneous response.

Special Hearing Tests

Discrimination tests (understanding ability) and recruitment tests can assist the physician in differentiating cochlear lesions from eighth nerve lesions. These and other precise tests of hearing function are available through otologic and audiologic consultation and should be utilized for diagnosis whenever a hearing loss of the neurosensory type accompanies vertigo.

The Caloric Tests of Vestibular Function

Caloric tests require little equipment, are simple to perform, and easy to duplicate. Moreover, they allow the physician to test each ear separately. Patients vary in their sensitivity to caloric stimulation. Therefore, testing should be started with mild stimulus in the expectation of inducing nystagmus, with little vertigo and no nausea or vomiting. Stronger stimuli can always be applied if there is no response.

With the patient seated, the head is tilted backward at an angle of 60° to bring the horizontal semicircular canal into the vertical position. This is the optimal position for maximal stimulation of this canal. A 20 ml. syringe, equipped with a rubber-tipped 15 gauge needle, is filled with water at 30° C. (tap water, cold to the touch, should be near the optimum temperature). Injection is made into the external auditory canal at the rate of 1 ml. per second, so that the water, which is cooler than body temperature, is in contact with the eardrum for a total of 20 seconds. The eyes are immediately observed for nystagmus. The direction of the rapid component is recorded, and should be toward the dry ear.

About 5% of normal patients will fail to develop observable nystagmus with this minimal stimulation. In these cases proceed with 5 ml. of ice water injected more slowly, so that the total duration of the injection lasts 20 seconds. This will produce nystagmus lasting 2 to 2½ minutes.

If still no nystagmus is produced, 30 ml. of ice water can be used over a period of 30 seconds. If no nystagmus is induced by this degree of stimulation, one may assume that the labyrinth is non-functioning.

The crucial diagnostic feature of this examination is the comparison of the duration of nystagmus produced by irrigation of each ear. In the patient with normal labryinthine function, the duration and frequency of the nystagmus will be almost identical on both sides. The duration of the nystagmus and the frequency of the beat are noted. Nystagmus usually lasts between 1½ and 2 minutes and the frequency is normally 1 to 3 per second. A five minute rest should be allowed between tests of each ear.

The caloric tests just described are easy to perform and simple to evaluate. They enable the examiner to decide whether the labyrinths are normal, hypoactive, or non-functional. It is also possible to compare the sensitivity of one labyrinth with the other.

In most clinical situations these simple tests are entirely adequate. However, more difficult diagnostic problems may require the knowledge and techniques of specialists and more complex equipment.

Other tests of vestibular function such as turning tests with rotational chairs or galvanic stimulation are useful but do not provide the ability for evaluating each inner ear separately. Tests for otolith function (gravitational effect), tests for vestibulo-vegetative responses and tests for vestibulo-spinal responses have as yet not been

perfected to the point where they can be used clinically.

	Peripheral	Central
Characteristic Onset	Sudden	Insidious, less frequently sudden
Characteristic Pattern	Episodic; paroxysmal	Continuous, occasionally paroxysmal
Sensation of Rotation	Frequent	Infrequent
Severity	Often intense	Seldom intense
Duration	Minutes to hours, rarely more than one week	Varies; days to months to years
Spontaneous Nystagmus	May be present	May be present
Type of Nystagmus	Horizontal or rotary	Horizontal, vertical or rotary
Positional Nystagmus	Small in all fields of gaze	Often changes with direction of gaze
Influence of Head Movement	Marked	Slight or none
Syncope	Never	Rare
Convulsions	Never	Occasional
Tinnitus	Common	Rare
Deafness	Common	Rare
Caloric Stimulation	Nonreactive or hypoactive	Unusually normal
Other Cranial Nerve or Long Tract Disturbance	Rare	Common

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Immunoglobulin Levels in Cerebrospinal Fluid

D. Riddoch and R. A. Thompson (Queen Elizabeth Hosp, Birmingham, England)
Brit Med J 1:396-399 (Feb 14) 1970

Quantitative analysis of the immunoglobulins G, A, M, and D in the unconcentrated cerebrospinal fluid of 207 unselected neurological patients, was carried out by single radial diffusion method. IgG was present in all specimens examined, and its concentration varied with the total cerebrospinal fluid protein. Raised levels, expressed as a percentage of the total protein, occurred in 62% of 45 patients with multiple sclerosis, as opposed to 14% of 160 patients with various other neurological disorders. When specimens with a total protein of 100 mg/100 cc or less were considered, measurement of the IgG proved to be a valuable aid in the differential diagnosis of multiple sclerosis; other clinically similar cases showed uniformly normal levels, IgA and IgM were found only in specimens with a raised total protein, and their presence had no other diagnostic value. IgD was not detected in the cerebrospinal fluid.

Transplantation of Liver in Man

R. Williams (King's College Hosp, London)
Brit Med J 1:585-592 (March 7) 1970

The author presents the overall results for 17 patients treated by orthotopic liver transplantation. Seven patients died within six days after surgery, but in the remaining ten the initial results were satisfactory, as shown by the return of liver function to normal in a patient with complete biliary obstruction, awakening from deep hepatic coma on the second day after transplantation, fall in the titer of serum mitochondrial antibody in primary biliary cirrhosis, and correction of hyperparathyroidism in a patient whose primary liver tumor was secreting parathyroid hormone. Two patients were operated on recently and two others were alive on the tenth and eleventh month after transplantation. One of these patients had cirrhosis with chronic encephalography and hepatoma, the other had a primary hepatoma without underlying cirrhosis. Liver biopsies have shown virtually normal histological appearances and albumin/synthetic rates measured by the ^{14}C carbonate method were normal.

A Surgeon's View of Arthritis

Jack Stevens, M.D.*

In the past quarter of a century there has been a marked expansion in our knowledge of articular physiology and pathology and a coincident increase in the interest of orthopedic surgeons in this fascinating field.

We may classify arthritis as follows:

Inflammatory

1. Bacterial—acute pyogenic
   —chronic granulomatous
2. Non-bacterial—auto immune
   —crystal induced

Degenerative

1. Primary
2. Secondary

Secondary to other systemic disorders.

The commonest of these are the degenerative and non-bacterial inflammatory or rheumatoid types and they constitute the subject of this review.

Osteoarthritis

The cause of degenerative joint disease remains a mystery. All we can surmise is that abnormal wear and tear affects healthy joints whilst abnormal joints give way with normal use. This simple distinction, together with Kellgren's recognition of generalized osteoarthritis, leads us to a working classification.

Primary O.A.—polyarticular (Kellgren)
—bilateral (hips or knees)
—monarticular

Secondary O.A.—monarticular

Pathology

Whatever the underlying cause, the destructive sequence is well known. Cartilage in pressure areas undergoes superficial tangential cleavage and flaking. There follows deeper cleavage and vertical fibrillation with the formation of pits and tissue loss, and these changes come to involve a greater area of the articular surface as the loading is more widely distributed. There is altered surface contour. Subchondral bone hypertrophy with hyperemia is accompanied by enchondral ossification of marginal cartilage to form osteophytes. Breaching of exposed bone, perhaps by microfracture, permits hydraulic penetration of synovial fluid and intra-osseous cyst formation. The synovial fluid and living membrane are hardly involved except that minor trauma may cause considerable hydrarthrosis and cartilage and bone fragments become embedded in the membrane. The fibrous capsule tends to undergo contracture in the antalgic joint posture and surrounding muscles exhibit spasms or atrophy.

How far these changes are reversible is not clear. Reconstitution of articular cartilage, after thinning in the early stages, may be possible and hyperemia may be reduced. It is also recorded that cysts and osteophytes may disappear and that sclerotic bone may undergo resorption towards normal architecture.

Non-operative Treatment

The surgeon, keen to employ his technical craft, must not overlook the possible benefits of non-operative treatment in osteoarthritis. Many patients do remarkably well for long periods of time with simple physiotherapy, ordered activity programs and medication. Weight loss and the use of canes are often extremely helpful in hip and knee disease. These measures should be given an adequate trial.

Operative Treatment

Surgery aims at relieving pain first of all, with restoration of motion and correction of deformity as secondary considerations. The type of procedure used must usually be related to the age, sex, occupation and general condition of the patient.

The procedures at present in use comprise four major groups which are variously appropriate for the joints involved.

These are: soft tissue release, osteotomy, arthrodesis, and arthroplasty.

Soft tissue release has had widespread use in hip disease and it has the double merit of simplicity of achievement and rapid return to function. Unfortunately, its effects in pain relief rarely last for more than two years and it is not much advised at present. For joints other than the hip it has been but rarely used.

Juxta-articular osteotomy has been used in the treatment of osteoarthritis of the hip for many years in Britain and in a few centers in this country. Exactly how it relieves pain is not known but in patients with good motion and not too advanced X-ray evidence of destruction, relief of

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pain may be expected in 85 per cent. There are other places where osteotomy is proving valuable, notably the knee. Correction of valgus or varus deformity with alteration of the thrust of weight-bearing gives surprisingly good relief. Occasionally in the great toe and even more unusually in the shoulder, osteotomy may be employed.

Total excision of a joint, with subsequent fusion will guarantee relief of pain if successful. It is suitable for very many joints but one must remember that mobility is a requirement for good upper limb function, stability is more desirable in the lower extremity. Patients must be very carefully selected for this procedure. Some will find it unacceptable at the knee or hip and the state of other joints must always be considered. To end up with two stiff knees or two stiff hips represents a major catastrophe, albeit a correctable one. Thus, arthrodesis may be employed in single joint disease (usually secondary osteoarthritis) of the hip, knee, ankle, shoulder, and wrist. It is possible to fuse multiple interphalangeal joints and great toe and thumb carpometacarpal joints.

Arthroplasty, the formation of a new, painless and mobile joint, is the ideal and the variety of available techniques testifies to the limited success of each. Progress is being made, however, and newer, more successful methods are coming into use.

In the hip we have a range from simple excision of the femoral head, through replacement of one side of the joint to interposition of a metal cup. Each of these has about a 70 per cent success rate, even after revision, and the post-operative program is usually protracted.

By far the most outstanding results are being obtained from total replacement of the hip which, in its present form, appears to have opened up a whole new approach. Its success lies not so much in the components, since similar procedures were tried over 30 years ago. What is different about the present method is the use of acrylic cement to form a firm bond between implant and bone. Another gratifying aspect is the sight of a patient walking without support as early as two weeks after the operation. Here is a major advance indeed.

Arthroplasty of the knee usually employs a metallic implant such as the McIntosh prosthesis. About two-thirds of patients do well with this, especially if ligament laxity is a major component. Total joint replacement for the knee employs a rather crude hinge and the results are only fairly good. Its use is restricted to patients with severe bilateral disease and here again acrylic cement is a valuable component.

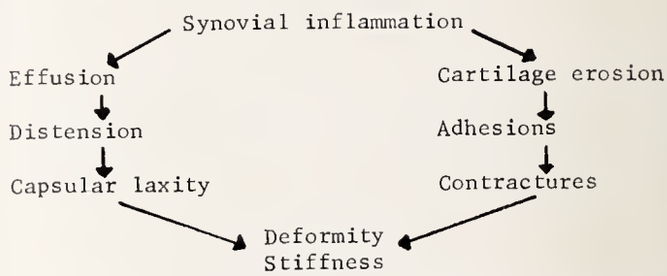
Arthroplasty has long been used in the treatment of osteoarthritis of the great toe and continues to be a standard procedure in the form of Keller's operation.

Arthroplasty of the shoulder and elbow is rarely used, and of the wrist hardly ever. But the use of hinge implants in finger joints is another relatively new development that is probably here to stay in one form or another.

The whole field of arthroplasty relies heavily upon the marriage of biology and engineering. This is currently taking place and can be expected to bring forth many flourishing progeny.

Rheumatoid Arthritis

Rheumatoid arthritis is a very different disorder from osteoarthritis. Whatever may be the primary cause, the target tissue is the synovial membrane of joint and tendon sheath. The peculiar inflammation initiates and maintains a well-defined series of events progressing along two parallel courses.



This is a simplified view which does not readily account for the classical morning stiffness but pain, a prominent symptom, may be ascribed in the early stages to synovial inflammation and capsular distension. The ultimate results of destruction set the scene for superimposed osteoarthritis which may, of course, be painful in the absence of active synovial inflammation.

In trying to delineate the specific surgical possibilities to be considered for patients with this potentially crippling disease, it serves our purpose to define three major stages in its progression.

The first or acute stage is well recognized when typical. The patient has obvious systemic illness and in each joint, the rather tense swelling is the result of pouring out of synovial fluid by an acutely inflamed, hyperemic and friable living membrane. Some joints may recover completely, but in those which do not, the transition to the

more or less subacute stage takes place in weeks or months as the disease becomes less hectically systemic and more prominently articular. Within each joint the picture changes from acute synovial inflammation to a hypertrophic state with beginning digestion of articular cartilage and fibrinous loose body formation. Fluid is much less abundant and the clinical appearance is one of soft doughy swelling rather than acute hydrarthrosis.

The duration, severity and ultimate outcome of this subacute phase are all extremely variable. Some recover, but not a few go on to severe joint destruction leaving little or no articular cartilage, dense intra-articular adhesions, and marked peri-articular fibrosis. Incongruous articular surfaces and instability from ligament laxity are important predeterminants of osteoarthritis.

This simple distinction of acute, subacute and late phases is clearly an over-simplification and the variability of the condition between patients and between different joints in the same patient, as well as the unpredictable course of the disease, is well known. Nevertheless, it does provide a useful guide for the surgeon in his evaluation of a particular patient.

The surgeon is at all times the handmaiden of the rheumatologist and can never replace him in this area of clinical work. What he has to offer is to be considered in the light of the total disability of the patient and not focused on a single joint.

Contraindications to surgery used to include active disease and current corticosteroid administration. Neither of these holds today.

In the acute phase there are two possible indications for surgical intervention in the rheumatoid patient. Where the disease is monarticular and a firm diagnosis has not been established, biopsy may be desirable. This is done not so much to give a positive diagnosis of rheumatoid disease as to exclude other inflammatory processes such as tuberculosis.

Occasionally, even the most intensively-pursued medical management may fail to control the disease and removal of the synovium from the most severely involved joint or joints may be considered. It must be understood that the new synovial lining, formed within six weeks, is likely to be diseased badly enough to cause symptoms in 40 per cent of these patients. However, if a successful result ensues, one should have some assurance of having done something positive towards preserving the articular cartilage.

In the subacute phase, hopefully before much cartilage destruction has occurred, synovectomy can be expected to relieve pain in 90 per cent of patients and perhaps, also, to confer some protection against further deterioration.

Unfortunately, not all the commonly affected joints are readily enough approachable to make synovectomy a reasonable undertaking. The knee, the elbow and the metacarpophalangeal joints are most suitable for this kind of surgery, the neck, the hip, the shoulder, and the ankle least appropriate. In between lie the finger joints, the wrist and the metatarsophalangeal joints.

Because stress across a joint appears to hasten the progress of the disease, it does become feasible to look at the hip, for example, in another way. Here synovectomy would demand either simultaneous anterior and posterior approaches or open dislocation of the joint. Neither of these is currently acceptable. As an alternative and in the presence of muscle spasm, an anterior approach to the hip, permitting section of the iliopsoas and adductor muscles and exision of the anterior capsule and synovium may be combined with subtrochanteric osteotomy to give remarkably rewarding relief of pain. Whether this affects the progression of the hip joint disease has yet to be determined.

In the chronic phase of the disease, so often regarded as being burned out, the problem is usually one of surgical rehabilitation of the total patient. This is particularly so in the second and third decades after juvenile rheumatoid arthritis has largely run its course and crippled a young person more or less severely. Depending upon the number of joints involved and to what extent, a program must be carefully planned. Should the lower limbs be tackled before the hands? Should both knees be done first or should one aim to get one good leg by operating on ipsilateral hip and knee so as to ambulate the patient early? If post-operative crutch-walking is foreseen are the upper extremities capable of supporting this? These and countless other questions require thoughtful review before any surgical procedure is undertaken. Failure to plan may be to court disaster.

The reconstructive procedures available to the rheumatoid cripple are similar to those available for osteoarthritis. There are some differences in overall approach, however. Multiple joint involvement makes fusion of any one undesirable. Peripheral joint involvement may call for greater attention to the feet and more especially the

hands. The typical forefoot deformity with metatarsophalangeal dislocation, toe clawing and metatarsal head dpression is eminently suitable for a particular reconstruction procedure.

The rheumatoid hand remains as perhaps the most difficult problem, despite various painstaking studies of the causes of deformity and numerous ingenious ideas about their prevention and correction. Three classical deformities affect the fingers in variable combination. They are, ulnar drift at the metacarpophalangeal joints, boutonniere at the proximal interphalangeal joints, and swan-neck of the whole finger. Again, these are hardly to be considered in dissociation from functional disorders about the wrist which include the classical caput ulnae syndrome. Surgeons who are extensively and enthusiastically involved in restoration of hand function can happily spend hours discussing the forces involved and their progressive effect through imbalance and contracture in abnormal joints and I do not propose to dwell on them now. Even if we completely understood the mechanism of hand deformity in rheumatoid arthritis, which we do not, then we still have to face the very difficult problem of the timing of any preventive or corrective surgery. When to operate is influenced by two important facts—inability to predict the rate of progression of deformity and the remarkable adaptive capability of these patients who often retain surprisingly good function in the presence of the most bizarre deformities.

Cosmetic surgery is rarely called for and any reconstructive procedure must aim to improve the basic prehensile functions of the hand in cylindrical grasp, spherical grasp, carrying hook, tip-to-tip pinch, pulp to side pinch, and 3-jawed chuck pinch.

The most valuable surgical procedures are applicable before deformity is established or soon after ulnar drift starts. This usually happens in the subacute stage and here, synovectomy of the metacorpopharyngeal joints with reefing of the extensor hood is appropriate. For established deformity, arthroplasty by excision or implantation needs to be combined with attempts to realign and balance the pull of muscles on the reconstructed joints. Despite some exciting new adventures and advances, we are still quite uncertain about matching an established surgical procedure to a completely understood mechanical disorder of the hand.

Conclusions

The surgeon's approach to the two commonest forms of non-bacterial arthritis has yet to mature. Consciously or unconsciously, he bases his proposed treatment on the known pathological changes, so that a relatively early attack on rheumatoid synovitis is desirable to prevent destruction. Osteoarthritis is less amenable to prophylaxis and operation is called for to relieve pain when this is severe enough to interfere with function, and, even then, only after a thorough trial of non-operative measures.

Controlled Trial of Cyclophosphamide in Steroid-Sensitive Relapsing Nephrotic Syndrome of Childhood

T. M. Barratt and J. F. Soothill (Institute of Child Health, London)

Lancet 2:479-482 (Sept 5) 1970

A significant reduction in the incidence of relapse of steroid-sensitive nephrotic syndrome was shown in a controlled trial of cyclophosphamide given during steroid-maintained remission. Toxicity was very minor, and the regimen-constitutes a useful advance in the management of these patients. The trial had two special features—the use of a semisequential analysis permitting planned repeated access to the trial data and the demonstration of a therapeutic effect of one drug while the manifestations of the disease were completely suppressed by another.

Adult Lean Body Mass Declines With Age: Some Longitudinal Observations

G. B. Forbes and J. C. Reina (Univ of Rochester School of Medicine and Dentistry, Rochester, NY 14603)

Metabolism 19:653-663 (Sept) 1970

Lean body mass (LBM), as estimated from ^{40}K counting, declines progressively during adult life. Rate of decline tends to speed up in later years, and is somewhat greater in men. By age 65 to 70 the average man has 12 kg less LBM than at age 25; the woman has 5 kg less. Longitudinal observations show that this trend is for the most part biological, not secular, in origin. The magnitude of the decline is such, and the sex difference in LBM great enough, to suggest that age and sex should both be taken into account in such matters as drug dosage.

Your Patient With a Speech and/or Hearing Problem

John Walton, M.A.* and Mrs. Martha Anderson, M.A.**

A mother comes to your office with a child of three who is not talking; where do you refer this mother and her child? Another mother has a child of six, she thinks he is stuttering; what do you tell her? Where do you refer her to get a clinical speech evaluation? And still another mother with a child of one who does not respond to sounds the way her other children did. Where do you refer her for a clinical audiological evaluation? One of your patients has had a stroke or cancer of the larynx, resulting in a laryngectomy and is seeking the services of a speech pathologist; where do you refer him? In the past, you may not have known where to refer any of the above patients. The purpose of this article is to inform you of the clinics that are available in Arkansas where you can get speech and hearing services for your patients.

As usual there are standard referral procedures and each clinic is different. You may obtain referral information from the clinic nearest you. These clinics are eager to work with our physicians in seeing that patients with speech and/or hearing problems receive the best services to help them back on the road of good mental, physical and educational health.

Clinical Programs in Speech Pathology and Audiology in Arkansas

ARKADELPHIA

Facility: *Henderson State College Speech Clinic*
Address: Box 2662, HSC, Arkadelphia, Arkansas 71923
Telephone: 246-5511, Ext. 202
Director: Mrs. Martha Anderson
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for post-laryngectomy, aphasia, stuttering, articulation, voice disorders, cleft palate, cerebral palsy, and language delay. Pure tone threshold hearing tests, speech improvement, auditory training, and lipreading instruction for the hearing impaired.
Eligibility: Clients of all ages.

Facility: *Ouachita University Speech Clinic*
Address: Ouachita Baptist University, Arkadelphia, Arkansas
Telephone: 246-4531, Ext. 269
Director: Mrs. Virginia Smith
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for stuttering, misarticulation, voice disorders, cleft palate, cerebral palsy, and language delay.
Eligibility: Clients of all ages.

CONWAY

Facility: *State College of Arkansas Speech Clinic*
Address: Conway, Arkansas
Telephone: 329-2931, Ext. 234
Director: Mrs. Austin Glenn
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for articulation, stuttering, aphasia, cleft palate. Language development and auditory training for the hearing impaired.
Eligibility: Clients of all ages.

EL DORADO:

Facility: *Setliff Hearing and Speech Center, Inc.*
Address: 304 East Peach Street, El Dorado, Arkansas
Telephone: 862-5155
Otolaryngologist-Medical Director: Reuben C. Setliff, III, M.D.
Audiologist: Gail T. Setliff
Speech Pathologist: Joan K. Beck
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for post-laryngectomy, aphasia, stuttering, articulation, voice disorders, cleft palate, cerebral palsy, language delay. Hearing evaluations (including infant testing), hearing aid selection, lipreading instruction, auditory training and speech improvement for the hearing impaired. The clinic provides a pre-school training program for hearing handicapped children utilizing oral-aural techniques.

FAYETTEVILLE

Facility: *University of Arkansas Speech and Hearing Clinic*
Address: 411 Arkansas Avenue, Fayetteville, Arkansas 72761
Telephone: 521-4246
Director: Don D. Bersinger
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for post-laryngectomy, aphasia, stuttering, articulation, voice disorders, cleft palate, cerebral palsy, language delay. Hearing evaluations, hearing aid selection, lipreading instruction, auditory training and speech improvement for the hearing impaired.
Eligibility: Clients of any age.

HOT SPRINGS

Facility: *Hot Springs Rehabilitation Center Speech Clinic*
Address: Hot Springs, Arkansas
Telephone: 624-4411, Ext. 295
Director: Mrs. Aurelia Smith, Speech Therapist
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for aphasia, stuttering, articulation, voice disorders, cleft palate, cerebral palsy, language delay. Hearing screening.
Eligibility: Any Arkansas resident, at least 16 years of age, who has a physical or mental handicap and who has a reasonably good chance of being made employable through rehabilitation services.

* Department of Pediatrics, University of Arkansas Medical Center.
** Director, Speech Clinic, Henderson State College, Arkadelphia, Arkansas.

JONESBORO

Facility: *State University of Arkansas Program in Speech Pathology*
Address: Drawer GG, State University, Arkansas 72467
Telephone: 935-6250, Ext. 217
Director: Dr. George Herndon
Clinical Services: Limited speech therapy for all speech disorders; pure tone threshold hearing tests.

LITTLE ROCK

Facility: *Arkansas Children's Hearing and Speech Center*
Address: 4815 West Markham, Little Rock, Arkansas
Telephone: 661-2328
Coordinator: David Canterbury
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for stuttering, articulation, voice disorders, cleft palate, cerebral palsy, language disorders or delay. Hearing evaluations, hearing aid selection, lipreading instruction, auditory training, speech improvement for the hearing impaired.
Eligibility: Arkansas residents under 21 years of age.

Facility: *Arkansas Rehabilitation Service Audiology and Speech Center*
Address: 2400 West Markham, Little Rock, Arkansas
Telephone: 371-1987
Audiologist: Mrs. Jane LeBlanc
Speech Therapist: Mrs. Jackie Lorenza
Clinical Services: Hearing evaluations, hearing aid evaluation, lipreading and auditory training for the hearing impaired. Diagnosis and evaluation of speech problems, speech therapy for aphasia, articulation, and stuttering.
Eligibility: Clients of the Arkansas Rehabilitation Service, children enrolled in or are candidates for the Arkansas School for the Deaf, children enrolled in the Arkansas School for the Blind, other referrals as time permits.

Facility: *Bailey-Pappas Ear Clinic*
Address: 1610 West Third, Little Rock, Arkansas
Audiologist: Michael Winston
Clinical Services: Hearing evaluations, hearing aid selection.

Facility: *Little Rock Otologic Clinic*
Address: 500 South University, Room 206
Audiologist: Robert G. Ivey
Clinical Services: Hearing evaluations.

Facility: *Easter Seal Rehabilitation Center*
Address: 2801 Lee Avenue, Little Rock, Arkansas 72205
Telephone: 663-8331
Executive Director: Mrs. Virginia Armistead
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for aphasia, stuttering, articulation problems, voice disorders, cleft palate, cerebral palsy, language delay. Auditory training and speech improvement for the hearing impaired.

Facility: *University of Arkansas Medical Center, Department of Pediatrics*
Address: 4301 West Markham, Little Rock, Arkansas 72201
Telephone: 664-5000, Ext. 891, 892, 893
Speech Pathologist: John Walton
Audiologist: David Canterbury
Clinical Services: Diagnosis and evaluation of speech problems. Hearing evaluations and hearing aid selection.

Facility: *Veterans Administration Hospital Audiology and Speech Clinic*
Address: 300 East Roosevelt Road, Little Rock, Arkansas
Telephone: 372-8861
Chief, Audiology and Speech Pathology: Dr. Amy Key Rudd
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for post-laryngectomy, aphasia, stuttering, articulation, voice disorders. Hearing evaluations, hearing aid selection, lipreading instruction, auditory training and speech improvement for the hearing impaired.
Eligibility: Veterans only.

NORTH LITTLE ROCK

Facility: *North Little Rock Speech Clinic*
Address: North Little Rock Community Center, 2700 Willow, North Little Rock, Arkansas
Telephone: 753-5944
Speech Therapist: Mrs. Pam Dashiell
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for post-laryngectomy, aphasia, stuttering, articulation, voice disorders, cleft palate, cerebral palsy, language delay. Hearing screening, auditory training, and speech improvement for the hearing impaired.
Eligibility: Clients of all ages.

PINE BLUFF

Facility: *Jenkins Memorial Children's Center*
Address: 2410 Rike Drive, Pine Bluff, Arkansas
Telephone: 534-6822
Director: Mr. Joe Sweatt
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for stuttering, aphasia, articulation, voice disorders, cleft palate, cerebral palsy, language delay. Hearing evaluations, lipreading instruction, auditory training, and speech improvement for the hearing impaired.
Eligibility: Clients of all ages.

SEARCY

Facility: *Harding Speech and Hearing Clinic*
Address: Harding College, Searcy, Arkansas
Telephone: 268-6161, Ext. 327
Director: Dr. Richard W. Walker
Clinical Services: Diagnosis and evaluation of speech problems, speech therapy for post-laryngectomy, aphasia, stuttering, articulation, voice disorders, cleft palate, cerebral palsy, and language delay. Pure tone hearing tests and speech audiometry.
Eligibility: Clients of all ages.

SURGERY at the UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE*

*Under the direction of Gilbert Campbell, M.D., Professor of Surgery.

Peripheral Nerve Injuries

Warren C. Boop, Jr., M.D.*

The Vietnam conflict, as all those before it, once again found physicians who lacked experience in the recognition and handling of peripheral nerve injuries. The civilian practitioner or surgeon will only occasionally be called on to care for the patient with peripheral nerve injury, and if his diagnostic acumen is not keen he may miss the opportunity altogether. Any patient presenting with an injury of an extremity should be closely examined for evidence of nerve deficit. Failure to look for nerve deficit is a far more common cause of missing the lesion than not knowing a particular nerve's anatomy.

While Head of the Neurosurgical Division of the Naval Hospital, Great Lakes, Illinois, for the period of November 1966 through October 1969, the author operated on or supervised the operation and subsequent care of 653 peripheral nerve injury cases. The great majority of these nerve injuries were a result of missile wounds sustained in Vietnam. However, also included were common injuries seen in civilian life, including low velocity missile wounds, stab wounds, wounds caused by broken glass, power saws, etc. The accompanying Table indicates the distribution of nerves injured in our series. As experience accumulated, the handling of the cases evolved to the pattern outlined below.

History

The history of the injury was usually of little value other than to note the date. In closed injuries it is important to determine whether the patient experienced immediate onset of numbness and weakness or whether this was of delayed onset, indicating possibly a compressing hematoma. A closed, stretch type injury with immediate onset of paralysis is rarely benefited by surgical exploration.

In penetrating wounds the nature of the injurious force is of some importance. A nerve injured by a sharp instrument such as a knife or a razorblade should generally be repaired primarily. Blunt, penetrating objects such as bullets, flying debris from automobile accidents, power saws, etc., cause lacerations of nerves which should be repaired at a later date.[1]

Examination

In fresh wounds of the extremities motor examination may be difficult and incomplete because of the pain induced with muscle testing. The classic wrist drop of radial nerve palsy and foot drop of peroneal nerve injury is easily detected. Detailed motor examination usually must be delayed for seven to ten days or longer after injury.

Sensory testing, on the other hand, may be carried out with little discomfort to the patient and can give presumptive evidence of total nerve deficit. For example, complete loss of sensation in the distal phalanx of the little finger is good evidence of loss of ulnar nerve function. Loss of sensation to pinprick over the distal phalanx of the index finger likewise signifies loss of median nerve function. Constant sensory loss is not seen with radial nerve injuries and is not a reliable indicator of partial or total damage to that nerve. With peroneal nerve deficit there is loss of sensation on the dorsum of the foot. Loss of sensation over the plantar surface of the foot signifies loss of tibial nerve function.

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Loss of sweating may be apparent in a peripheral nerve distribution within minutes after the nerve is interrupted. This is good evidence of severe nerve injury and is a valuable finding in evaluating the question of hysterical or malingering deficit. Alleged areas of sensory loss following peripheral nerve injury can be verified by demonstrating the absence of sweating.

Several weeks after injury detailed motor function tests can be carried out. Atrophy may be detected by comparing the extremity with the normal side. Reflexes may be readily examined. Trophic skin changes may be detected, especially with median and tibial nerve injuries. After 20 days the electromyogram (EMG) will also begin to give confirmatory evidence of the neural deficit.

Treatment

Initial care of wounds of the extremity, even though peripheral nerve injury is apparent, should include only repair of lacerated arteries, tendons and bone and debridement of necrotic tissue with primary or delayed closure of the wound as appropriate. No attempt should be made to dissect out or tag nerve elements. "Tagging" with a suture or wire is of no benefit in later surgery and may possibly harm a salvageable portion of the nerve. Nerve tissue is not elastic and does not contract if severed; therefore loose ends need not be approximated as is sometimes done with tendons.

Primary nerve repair should be attempted only if the nerve has been lacerated with a sharp instrument such as a knife or razorblade. There are several reasons why primary nerve repair is discouraged, including the spread of contamination through fascial planes, difficulty in approximating the friable epineurium found in acute stages of injury and the better demarcation of injury which is possible with delayed repair.[2] In addition, nerve anastomosis may be time consuming and is therefore best done as an elective procedure rather than as an emergency. Experience shows a high incidence of failure of regeneration through these primary anastomoses.[1,2] If there is any doubt about the extent of injury to the nerve, and this is true in all but the lacerations by very sharp instruments, delayed repair is preferred.

If nerve repair is delayed, interim physical therapy may be instituted. Massage, whirlpool and galvanic stimulation of the muscles may be of some benefit. The only braces generally prescribed are those for the wrist drop or foot drop. It is particularly important that the patients be instructed in self therapy so that these braces are removed and all joints mobilized several times a day.

If the nerve is known to be severed from examination of the initial wound, and primary repair has not been indicated, the optimal time for repair of the nerve is between three to six weeks after injury. To delay repair beyond this time reduces the degree of eventual return of motor function. The extensive experience documented in World War II indicates that a delay of six months in repair of the nerve injury may result in 30% loss of functional return.[3] A year after injury, motor return is so poor that, in general, it is not worth repairing nerves at this late date to regain motion. On the other hand, sensory return may be obtained even two to three years after a nerve injury. It is so important in some instances, particularly in the median nerve distribution, that it is well worth attempted repair of this nerve even several years after injury.

In closed, non-penetrating nerve injuries a delay of three to six months is acceptable before exploration of the nerve since so many of these injuries will regenerate spontaneously.

Technique

Repair of the nerve entails a dissection of the injured portion and a resection of all fibrous tissue until fresh fascicles are encountered. The gap in the nerve can be overcome by mobilization, flexion of joints, stripping of nerve branches and, in some instances, transplantation of the nerve. Using these techniques large gaps can be overcome in almost all the nerves. The use of magnification during the operative procedure is of considerable value in obtaining optimal nerve end approximation. The anastomosis should be made without tension, using very fine sutures such as 6/0 Polydek. Approximately 2% of the nerve injuries in this series could not be handled by primary anastomosis. In these cases nerve grafts or tendon transplants were utilized, usually the latter as grafting techniques as yet are of very little value.[4]

In recent years the use of a cuff surrounding the anastomosis has been revived. Ducker et al.,[5] have recommended encasing the anastomosis with a premeasured cuff, based on experiments in animals showing inhibition of the fibrous reaction. During the first half of this series no cuff was used. During the last 18 months a silastic cuff was used about the site of anastomosis. It is the author's

distinct impression that there was no difference in the end result whether or not the silastic cuff was utilized.

Results

The anticipated results of suture of a peripheral nerve depend on several variables. The inherent factors of the particular nerve involved may be the first of these. Suture of the radial nerve may be anticipated to give far better results than suture of the ulnar nerve. Injuries to other structures, in particular arteries, bone and the extent of soft tissue damage are factors in prognosis. The level of nerve injury in extremities is also very important. The more proximal injury leads to a poorer prognosis. For example, laceration of the ulnar nerve at the wrist can give fair motor regeneration when properly sutured. However, the same surgical anastomosis high in the arm usually results in poor return of function of the ulnar innervated muscles. This is such a prominent factor for injuries of the brachial plexus that it is fruitless to suture the ulnar components, that is the lower portion of the brachial plexus. However, since it is only a short distance from the upper brachial plexus to the deltoid, biceps and brachialus muscles, a good result may be anticipated with suture of the upper portion of the brachial plexus.

In the lower extremity we were found in agreement with others[3] that if adequate resection and anastomosis was done, repeated attempts at suture were not justified in the face of failure of regeneration. These patients usually adjusted to ambulation with a short leg brace after a few months and most did not desire re-operation.

Initially in this series all tibial nerve injuries were repaired. We subsequently felt that injuries of the tibial nerve below the distal one-third of the calf should not be repaired. Since the primary function of the nerve below this level is sensory to the sole of the foot we had repaired these nerves in anticipation of recovery of sensation. However, with few exceptions the sensation that returned was unpleasant and at times incapacitating. Patients preferred the formerly numb foot to painful, dysesthetic foot on which they could not bear weight without discomfort.

The results of nerve repair on the whole are gratifying but limitations in some instances must be accepted. Nerve injuries are complex problems, not the least of which is training the reinnervated muscle to regain intricate function. For injuries in the lower extremity, everyday use is usually stimulus enough for optimal recovery. In the upper extremity, physical therapeutic aids may be needed, both in keeping joints mobile and in the re-education in the use of these muscles. Understanding and personal drive may be the ultimate factors in determining whether or not a patient returns to his original occupation.

Incidence of Nerve Injured*

Nerve	*Number*	*Percent*
Median	95	16
Ulnar	174	28
Radial	83	14
Sciatic	93	15
Tibial	57	9
Peroneal	67	11
Femoral	15	2
Brachial Plexus	21	3
Musculocutaneous	7	1

*The total of 612 nerves injured represents only those cases in which detailed records were available.

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5. Ducker, T. B. and Hayes, G. J.: Experimental Improvements in the Use of Silastic Cuff for Peripheral Nerve Repair, Journal of Neurosurgery, 28:582-587, 1968.

Combined Treatment of Parkinsonism With L-Dopa and Amantadine

R. B. Godwin-Austen et al (National Hosp for Nervous Diseases, London)
Lancet 2:383-385 (Aug 22) 1970

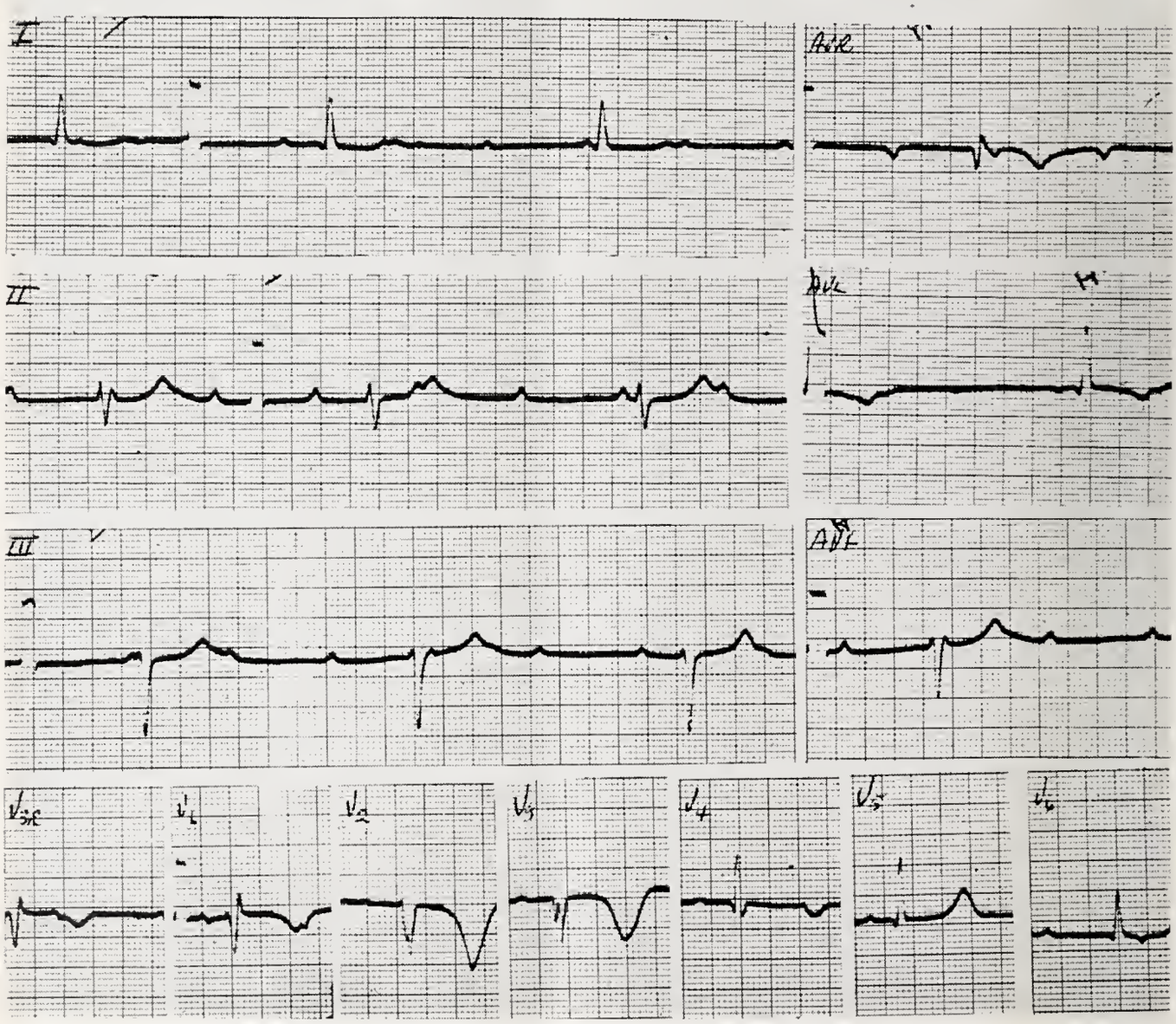
A double-blind crossover trial of combined treatment with amantadine and L-dopa was conducted in 24 patients with parkinsonism. Twelve were on long-term treatment with L-dopa, and amantadine was added to their treatment, while 12 had L-dopa added to their long-term treatment with amantadine. Further benefit was shown in the group in whom amantadine treatment was supplemented by L-dopa, whereas no additional benefit was detected in patients on optimal L-dopa therapy when amantadine was added. Combined treatment with these drugs is only indicated when the maximum tolerated doses of L-dopa is very small.

ELECTROCARDIOGRAM OF THE MONTH

AGE: 80 SEX: Female BUILD: Stocky BLOOD PRESSURE: 180/60
CARDIAC DIAGNOSIS: None.
OTHER DIAGNOSES: No digitalis by history.
MEDICATION:
HISTORY: Peripheral edema, dyspnoea, episodes of syncope, duration of symptoms not known.

See Answer on Page 236

TEST TRACING NO 94



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 236

C. R. Cassady, M.D.

HISTORY AND PHYSICAL EXAMINATION: Frequent episodes of vomiting and complaints interpreted as being secondary to headache were noted in this three-year-old Negro female. Nystagmus had been noted for approximately one year and visual field disturbance was found upon examination.

PUBLIC HEALTH AT A GLANCE

Preliminary Results From Microwave Oven Surveys in Arkansas

William H. Oates, Jr.*

The Arkansas State Legislature passed into law on April 17, 1969, Act 460, the Electronic Products Radiation Control Act. This law enables the State Department of Health to develop and administer performance standards for electronic products which are capable of emitting ionizing or nonionizing electromagnetic or particulate radiation. Examples of such products are microwave ovens, lasers, color televisions and particle accelerators. Specifically excluded from the provisions of the Act are any therapeutic instruments approved or licensed by the FCC, for example diathermy units.

By authority of Act 460, the Arkansas State Department of Health is authorized to require registration or licensing for the manufacture, installation, distribution, repair, and use of electronic products for which specific regulations have been set forth. The Act also allows for exemption from licensing or registration those electronic products which do not constitute a significant risk to the health and safety of the public. And, it is the responsibility of the Division of Radiological Health to ascertain whether or not an electronic product constitutes a significant health hazard.

During the next two years, an evaluation will be made of the public health significance of a variety of electronic products which will include but not necessarily limit to, microwave ovens, industrial microwave units, lasers and demonstration type cold cathode gas discharge tubes.

* Division of Radiological Health, Arkansas State Department of Health.

The following activities will be conducted for each product:

(1) A state-wide inventory
(2) Physical inspections and surveys of the devices at the user level
(3) A hazard evaluation of each product
(4) Development of a data management system for compiling, retrieving and reporting inspection information
(5) A study of the significance of the role installers and repairers play in electronic product safety and
(6) The institution of a regulatory program compatible with programs of other States and the Federal Government.

Our initial efforts concerning the radiological aspects of electronic products has been primarily directed toward microwave ovens. The principle reasons for choosing microwave ovens are (1) considerable publicity concerning the potential health hazards of these devices and (2) proposed legislation by the Federal Government which will limit the power density leakage from microwave cooking units.

Nearly 100,000 microwave ovens are now in use in the United States: 40,000 in private homes and 60,000 in commercial establishments. During 1968 total sales were estimated to be 40,000 units most of which were the type used in commercial food service establishments. There are over 20 different companies now manufacturing microwave ovens with the price per unit ranging from a little under $400 to nearly $3,000.

Besides the controls and structural cavity, microwave ovens, known also as radarange and electronic ovens, consist basically of a microwave generating magnetron tube, a wave guide to direct the radiation to the cooking chamber and a stirrer to distribute the radiation throughout the chamber. These cooking units are generally operated at frequencies of 915 or 2,450 megahertz and the most likely place for radiation leakage to occur is around the door. Microwave ovens also have one or more interlocks to shut off the power supply when the doors are opened before the cooking cycle is completed. A few ovens have been found to have faulty interlocks and units will continue to operate when the doors are opened which is obviously an undesirable situation. The perforated screen doors are designed with the wavelength of microwaves in mind and therefore, radiation transmission will not generally occur through these screens. However, if the screens are damaged or misaligned, significant power densities will be present in the vicinity of the ovens.

In 1969, 155 microwave ovens were surveyed in a four-stage area (New York, Mississippi, New Jersey, and Massachusetts) by representatives of Federal, State, and local health agencies. More than 32 percent of these ovens leaked radiation in excess of the self-imposed industry standard of 10 mW/cm^2 and the leakage from 45 percent of the ovens surveyed exceeded 5 mW/cm^2. Representatives from the State of Florida found similar results in a survey of 76 ovens.

The first step in our study of microwave ovens was to inventory the number and location of ovens being used in Arkansas. The following methods were used to obtain this information:

(1) By communication with microwave oven manufacturers
(2) By communication with vending companies serving the state
(3) By soliciting help from other state and local health personnel

Initially, letters of inquiry were sent to all known oven manufacturers asking for information concerning the sale and distribution of microwave ovens in Arkansas. In the letters we explained to the manufacturers that we were trying to locate all the ovens in use in Arkansas and that we planned to survey each oven for radiation leakage. As you might expect, we received a variety of responses to our initial efforts. A few companies provided us with lists of individuals or vending companies who owned microwave ovens. And several manufacturers gave us the names and addresses of their Arkansas located dealers and distributors who have helped us in our inventory efforts. Only one responding company refused to help us in this project.

All vending companies serving Arkansas must be registered with the Food and Drug Division of the State Department of Health. A listing of those vending companies providing hot food services was obtained from the Food and Drug Division and 23 companies were contacted concerning the use and location of microwave ovens. Nineten of the 23 companies have microwave ovens with the usage varying from as few as 2 ovens for one company to as many as 36 ovens for another company.

Information obtained from the Hospital and Nursing Home Division of the State Department of Health shows that only two hospitals in the State have microwave ovens in their cafeterias and none of the nursing homes utilize microwave ovens. All hospitals and nursing homes in Arkansas are inspected periodically by staff personnel of the Hospital and Nursing Home Division.

An inventory form for microwave ovens was developed and sent to the 28 chief county sanitarians in the State. The sanitarians were asked to fill out one of these forms and return them to the Division of Radiological Health anytime they found an oven during their routine inspection of public eating establishments. The only drawback to this inventory approach in Arkansas is that only 44 of our 75 counties are served by sanitarians.

Table 1 summarizes the number of microwave ovens that have been located in Arkansas as of July 1, 1970. So far about 25 percent of these ovens have been surveyed for radiation leakage by using survey procedures developed by the U. S. Public Health Service. A Narda 8100 survey meter employing two orthogonal antennas with a thermo-couple detector was used to make measurements of radiation leakage at a distance of 2 inches from the ovens. All measurements were made with a 275 milliliter water test load in the center of the cooking cavity. The survey consists of two determinations—a door interlock check and a closed door leakage measurement. The adequacy of the interlocks are tested by either slowly opening the oven door while surveying the perimeter of the door or by using a shim test. In fact, most of the ovens surveyed were given the

progressive shim test. Shims (2 inches long and ½ inch wide) are placed between the door and the cabinet and are located opposite the hinge side of the door. Shim thicknesses are increased by intervals of 1/16 inch until the oven cannot be activated. Leakage determination are then made at the last shim thickness that the oven can be operated. The second part of the test procedure consists of taking measurements around the door and view screen with the oven door completely closed.

Table 2 summarizes the results of our microwave oven survey as of July 1, 1970. As was mentioned earlier, these 103 ovens represent about 25 percent of the ovens that have been located in Arkansas. In comparison, the ovens we have surveyed have shown much less radiation leakage than the 155 ovens surveyed in Mississippi, Massachusetts, New Jersey and New York during 1969. For example, only 26.4 percent of the 155 ovens surveyed in those four states leaked radiation less than or equal to 1 mW/cm², while about 52 percent of the ovens surveyed in Arkansas have demonstrated microwave leakage less than or equal to 1 mW/cm². Also, about 33 percent of the 155 ovens surveyed displayed leakage power densities in excess of 10 mW/cm². Only about 20 percent of the ovens in Arkansas leaked radiation in excess of 10 mW/cm². However, three of the ovens we surveyed demonstrated radiation leakage in excess of 200 mW/cm² at a 5 cm distance. The high leakage from one of the ovens was due to a inverted screen assembly. This situation was corrected immediately by a serviceman and the oven was resurveyed. The maximium leakage after repairs was made was 4 mW/cm². Another one of the ovens showing a large amount of leakage was about 10 years old. The door was about to fall off, the seals were pitted and burned and part of the viewing screen was missing. A hand held 4-watt fluorescent bulb would flicker at a distance of about 6 feet from this particular oven.

As already mentioned, these data represent only the preliminary results of our study. We are planning to do a systematic survey of all the ovens that have been located. We are also working on computer programs that will give us a statistical analysis of our survey data in an attempt to establish a correlation between radiation leakage and age of the oven, type of defects, main usage, and use frequency.

TABLE 1

INVENTORY OF MICROWAVE OVENS IN THE STATE OF ARKANSAS—JULY 1, 1970

Type of Installation	*Number of Ovens*
Snack Bars	175
Restaurants	107
Private Homes	91
Hospital Food Service Department	2
Other	17
Total	392

This total is composed of ovens with the following brand names: Litton, Omnivend, International, Vendo, Thermo-Kinetics, Tappan, Amana, Toastmaster, and Raytheon.

TABLE 2

MICROWAVE OVEN SURVEY DATA SUMMARY FOR STATE OF ARKANSAS—JULY 1, 1970

Manufacturer	*Ovens Surveyed*	*Maximum Leakage Power Density (mW/cm²) Door Closed or Door Open*					
		≤1.0	1.1-5.0	5.1-10.0	10.1-20	20.1-30	>30
Amana	24	24					
International (Vendo)	4	1	2		1		
Litton	53	22	14	3	6	4	4
Omnivend	4		1	1	1	1	
Tappan	2				1		1
Thermo Kinetics	1			1			
Raytheon	15	8	2	4			1
Totals	103	55	19	9	9	5	6
	(100)	(52)	(17.9)	(8.5)	(8.5)	(4.7)	(5.6)

EDITORIAL

Cirrhosis Alters Hormone Metabolism

Alfred Kahn, Jr., M.D.

Cirrhosis of the liver is accompanied by many metabolic changes that are ill understood. The liver chemically alters many steroid hormones and interference with these processes induces visible physical changes in the patient. Spider angiomata, hypertrophy of the male breast, atrophy of the testes, palmar reddness, and other symptoms have in the past been suspected to be the results of excessive circulating estrogens. This has led to studies relating liver disease and estrogens.

Zumoff, Fishman, Gallagher, and Hellman (Journal of Clinical Investigation, Vol. 47, p. 20, January, 1968) have studied "Estradiol Metabolism in Cirrhosis." They make the point that in the past all studies have used the three "classical" estrogen metabolites: E1 or estrone, E2 or estradiol, and E3 or estriol; the interesting fact here is that these three widely used metabolites make up only 40% of the urinary metabolites, and using this partial picture to make conclusions about total estrogen metabolism could lead to very erroneous conclusions. Also some of the urinary metabolites do not come from what might be catalogued as effective estrogens.

Zumoff, et al., gave radioactive tagged estradiol to six cirrhotics (5 men and 1 woman) and to twenty-three healthy controls. They found definite abnormalities in the estradiol metabolism. Firstly, estradiol metabolites were excreted in larger than normal amounts the first day and less than normal in the next two days; probably the first day products represents metabolites that do not require biliary excretion whereas the second and third day products do undergo enterohepatic circulation—and this is interfered with in cholestasis. Total urinary end products of estrogen metabolism were increased in the cirrhotic patients.

Zumoff found that the total amount of estrogen metabolites excreted in the urine as glucosiduronates was normal. Conjugating substantial glucuronide is a method the liver uses to "detoxify" chemicals. Although the total glucuronates were normal, the division of glucosiduronates in the seven substances studied was abnormal. They believe that estrone is metabolized by two parallel pathways one of which leads via an intermediate to estriol and the other to two methoxyestrone. Their results indicate a marked reduction of the pathway to two methoxyestrone and a slowing down between the intermediate point and estriol in the other pathway; this intermediate point is sixteen alpha hydroxyestrone.

Unfortunately as Zumoff points out that although their study clearly shows an abnormal estrogen metabolism in cirrhosis, it does not seem to explain the feminzing effects (dypirestrogenic syndrome) as the principal increased metabolic end product of estradiol metabolism is sixteen alpha hydroxyestrone appears to be only weakly estrogenic.

Zumoff, Bradlow, Cassuoto, Gallagher, and Hollman, (Journal Clinical Endocrinology and Metabolism, Vol. 28, p. 92, January, 1968) have published on an experimental approach to the understanding of altered cortisol metabolism in cirrhosis. They gave no substance related to testosterone—norethandrolone—to two subjects with normal liver function and observed the effects of this substance on the metabolism of radioactive cortisol. They found that a reversible abnormality of cortisol production could be induced by norethandrolone, and this abnormality was similar to the altered cortisol production in cirrhosis. After administration of this drug, there was a decreased conversion of cortisol to T.H.D.,

increased amounts of cortolone, and increased amounts Reichstein's epi U and U; this is the abnormality seen in cirrhosis only. The author's relate this to the onset of cholestasis from norethandrolone administration. Zumoff, et al., point out that in cirrhosis in addition to the altered cortisol excretion, there is a decreased glucosiduronate formation which does not appear with the administration of norethandrolone and this may be related to the fact this drug produces only part of the anatomic changes seen in cirrhosis. Also, noted with norethandrolone were changes not found in cirrhotics namely decreased cortisol production and an increase of eleven hydroxy to eleven ketometabolites.

These hormone studies add to our understanding of the altered chemistry of cirrhosis of the liver.

ANSWER—Radiology Case of the Month

DIAGNOSIS:

Craniopharyngioma, cystic type.

RADIOGRAPHIC FINDINGS:

Lateral and AP views of the skull show a 2 x 2 x 3 centimeter suprasellar mass. Its thin wall is outlined by partial calcification. Enlargement of the sella turcica with thinning of the dorsum sellae and erosion of the tuberculum sellae and anterior clinoid processes is demonstrated.

DISCUSSION:

Craniopharyngiomas arise from remnants of Rathke's pouch. Of the two structural types, the solid tumors are composed of simple squamous epithelium, while the cystic ones have a columnar epithelium surrounded by dense connective tissue. The latter contain calcium within the fibrous wall 70-80% of the time, while the former almost always are calcified.

Craniopharyngiomas present most often in childhood, however, they may occasionally go undiagnosed until middle or late adulthood. The clinical picture presented is one of headache, visual disturbances, other symptoms of increased intracranial pressure, and delayed skeletal maturation.

The radiographic findings presented above are classical. The changes in the sella are secondary to direct pressure by the contiguous neoplasm. If the neoplasm becomes sufficiently large, obstruction at the foramen of Monro may cause hydrocephalus.

REFERENCES:

1) Taveras, Juan M., and Wood, Ernest H.: Diagnostic Neuroradiology. Williams and Wilkins Company, Baltimore, 1964. See pp. 1.189, 1.461.

THINGS TO COME

Postgraduate Medical Seminar Cruise Announced

The Department of Postgraduate Medicine of Albany Medical College announces reservations now being accepted for the Twelfth Postgraduate Medical Seminar Cruise January 5-20, 1971.

A 15-day cruise from New York aboard the luxurious and distinguished ship "Gripsholm" of the Swedish American Line.

Ports of call include San Juan, Dominica, St. Vincent, Trinidad, Barbados, Martinique, and St. Thomas.

Faculty of the Albany Medical College will present a comprehensive shipboard postgraduate program, covering subjects in internal medicine, cardiology, oncology, psychiatry, surgery, and obstetrics and gynecology.

Request has been made for continuation study credit by the American Academy of General Practice.

For information write to:

Girard J. Craft, M. D.
Department of Postgraduate Medicine
Albany Medical College
Albany, New York 12208

ANSWER—Electrocardiogram of the Month

A: 86

RATE: V: 32 RHYTHM: Idio-ventricular (complete A-V block)

PR: ..... sec. QRS: .12 sec. QT: .62 sec.

SIGNIFICANT ABNORMALITIES:

P-P interval 0.70. R-R interval 1.86, regular.
Prolonged QRS, significant Q in $V_{3,4}$ c abnormal T inversion.

INTERPRETATION: Abnormal.

Complete A-V block c idio-ventricular rhythm.
Residuals previous antero-septal infarction.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

The American Medical Association emphasized that the quality of medical care should not be sacrificed for the sake of economy in government health care programs.

Dr. William O. LaMotte, Jr., of Wilmington, Delaware, chairman of the AMA's Council on Legislation, repeatedly stressed the importance of assuring high quality care in testimony at a Senate Finance Committee hearing on proposed changes in Medicare and Medicaid.

He also pointed out the advantages of the AMA's plan for review of physicians' services aimed at holding down costs over an alternative proposal before the committee. The AMA supported a provision of the proposed legislation that would provide for physical therapy services but opposed including chiropractic services under Medicare.

Dr. LaMotte said that there should be pilot projects before a "Health Maintenance Organization" program is started nationwide. A HMO would provide both hospitalization and physicians' services for Medicare patients for a set per capita amount.

"There are questions regarding in-fact cost savings, as well as the quality of health care which may be provided when there are economic incentives to providers to reduce utilization," the AMA spokesman said. "We wish to assure that Medicare patients uniformly receive the best quality care.

"To this point of quality care, we have one additional concern. As defined in the bill, the HMO may be a 'for profit' organization and one managed, controlled and operated by lay individuals. Under such circumstances, the incentive for profit and/or lack of the basic essentials of knowledge, training and experience in medical matters could result in the patient being furnished less than the optimum of quality care. To avoid such a result, we recommend that organizations delivering health care should be under the control and guidance of medical personnel."

Dr. LaMotte also questioned the desirability of a provision that would restrict payments to institutions.

"Will this section create different classes of services based upon the ability or desire of patients to pay for additional services?" Dr. LaMotte asked. "A goal of Medicare was to make available to all over 65 persons the same level of health care available to other individuals. Has that goal now been changed?"

He assured the committee that the nation's physicians as a group "share the concern of the public and the Congress" concerning rising health care costs. But, he said, the AMA must oppose a provision that would substitute an arbitrary statutory limitation on physicians' fees for the "reasonable" fee now allowed. He said cost factors were too complex for such a simple solution and that the arbitrary limitation would make the medical profesion the only sector of the nation's economy under price or wage controls.

As for utilization or peer review, Dr. LaMotte said the AMA objects "most forcefully" to a provision of the pending legislation that would have non-medical groups act as review teams and pass judgment on medical services.

Following Dr. LaMotte's testimony, the committee modified somewhat the professional review amendment sponsored by Sen. Wallace F. Bennett of Utah, second ranking Republican on the committee, after he earlier heard an AMA spokesman advocate the peer review principle.

The modified version relaxed a requirement for pre-admission clearance to hospitals for elective surgery to leave the matter of such a requirement up to review agencies. But the committee version would permit the Secretary of Health, Education and Welfare to enter into agreements with organizations or agencies other than state medical societies for administering the review programs in areas of 300 or more physicians. The AMA contended strongly that the responsible agencies should be only state medical societies.

Meade Whitaker, tax legislative counsel for the Treasury Department, asked the committee to add a provision to the legislation that would require health insurance companies and carriers to report unassigned payments to physicians and other providers of health care. Unassigned payments go directly to patients to be given by them to their physicians. A similar proposal was knocked out of last year's tax reform legislation by a House-Senate conference committee.

The AMA—along with the carriers and HEW—have opposed mandatory reporting by carriers of unassigned payments on the grounds that it would be difficult and costly to furnish the data and that, in many instances, the patient might not have passed along the payment to the physician. This last circumstance unfairly would put on the physician the burden of proving that he did not receive such income.

Whitaker said the Internal Revenue Service had found that more than half of 3,000 physicians who received $25,000 or more in government Medicare and Medicaid payments in 1968 failed to report a substantial amount of their income to the tax agency.

The audits were ordered after the Senate committee raised the question of whether physicians receiving a large total of annual payments under the government medical programs were paying income taxes on all of it.

"Preliminary results indicate a number of instances of substantial unreported income, including some where the omission exceeds $100,000," Whitaker said.

The committee had turned over to the IRS the names of 11,000 doctors who had received Medicare and Medicaid payments exceeding $25,000 in 1968. Whitaker said 4,000 of the 11,000 doctors "justified detailed audit" and 3,000 of the audits were nearly complete, and that "about half of the 3,000 we audited will come up with substantial deficiencies" in reported income.

Sen. Russell B. Long (D., La.) said the investigation had disclosed a "vast area of tax cheating" and urged the IRS to initiate criminal prosecutions against doctors who had hidden their Medicare or Medicaid income.

Long added that, as far as he could see, the AMA "from the ethical point of view on taxes, has been completely forthright and honorable and sought to shield no one."

Long agreed with the AMA as to NOT including chiropractic services in the Medicare program. He told a chiropractic spokesman testifying before the committee:

"Insofar as you can convince me that you are doing somebody some good, I would be willing to cooperate, but I am not inclined to cooperate when I am not convinced that you have. My feeling is the only time a chiropractor tried it on me it didn't do any good, so I guess I am prejudiced by that."

* * *

The Nixon Administration came out strongly against the cradle-to-grave comprehensive national health insurance legislation sponsored by Sen. Edward M. Kennedy (D., Mass.) and supported by organized labor leaders.

John G. Veneman, Under Secretary of Health, Education and Welfare, testified before the Senate Committee on Labor and Public Welfare, that the program that would be provided by the legislation "is not a proper or workable approach to the solution of the health problems of this nation" and would cost $77 billion in the first year of full operation.

The committee held hearings on the legislation this year only to publicize it and to provide a forum for its supporters to expound their views. The sponsors resorted to a gimmick—a change in the financing provision—to get it before the labor and public welfare panel after it first was sent to the finance committee which ordinarily handles such legislation. The same maneuver was used in 1949 to get a hearing on President Truman's national health insurance proposal. Kennedy and six co-sponsors of his legislation are members of the labor and public welfare committee.

"There are those who insist that the present system is sound and should be left alone," Veneman said. "Others demand that we throw out the baby with the bath water and replace our pluralistic health enterprise with some monolithic scheme in which the Federal Government controls everything.

"I think both points of view are wrong. The deep troubles of the health care enterprise have been nurtured by many factors, not the least of which is past failure to plan and prepare for the soaring demand that observant people knew was coming. But I do not believe that past neglect means that we now have to start over and pursue some course of action that would be entirely alien to our basic traditions.

"The central issue, over and above the inconceivable commitment of general fund revenues

for S. 4323, is whether such a drastic abandonment of existing mechanisms in our health care system is necessary to remedy the defects in the system and whether, in fact, it may not create more problems than it will solve.

"Government is currently purchasing more than 36% of the total output of the health care system. This figure indicates that the use of its purchasing power is probably the government's primary source of leverage to initiate changes in the organization and delivery of health care. As government becomes more involved in financing it also has a greater responsibility to remedy the defects in the system.

"The question now is whether we should divert revenues needed for income maintenance, nutrition, the environment, housing and other health-related efforts, and concentrate them all on creating the federal system of health financing proposed by S. 4323. To do so would assume the failure of the measures currently proposed to correct defects in the present mixed public-private health system.

"In short, we (the Administration) have made substantive recommendations for improving the organization and delivery of services, increasing the efficiency of the health care industry, and for stimulating necessary reorganization and redistribution, through financing mechanisms. We are very much aware of the urgent need for solution of many problems in the financing and delivery of care, and have committed ourselves to an insurance program to provide protection to low income families with children.

"However, we have serious reservations about the desirability of embarking on a program like S. 4323, that will protect not only the unprotected but those with substantial coverage, and that will radically restructure the health financing and health service industry without having tested the instruments of change."

OBITUARY

H. King Wade, Sr.

H. King Wade was born and reared at Sherman, Mississippi. He attended public schools at Sherman and was graduated from Valparaiso University, Valparaiso, Indiana. He was a 1916 graduate of the University of Tennessee College of Medicine. Dr. Wade interned at Baptist Memorial Hospital in Memphis.

Dr. Wade was a member of the Army Medical Corps during World War I and received training in the specialty field of Urology during his military service. He became a Diplomate of the American Board of Urology in 1936.

Dr. Wade was very active in affairs of the medical profession. He served as president of the Garland County Medical Society, as president of the South Central Branch of the American Urological Association, and president of the Mid-South Postgraduate Medical Assembly. He served as the Arkansas Medical Society councilor from his district and held the position of chairman of the Council. He was elevated to the presidency of the Society in 1946. In 1967 he was granted life membership in the Arkansas Medical Society.

Civic interests occupied much of the time of Dr. Wade. He had served as president of his local Chamber of Commerce and as president of the Boys' Club. He was a charter member and past president of the Hot Springs Kiwanis Club. Dr. Wade was also a member of the Masonic bodies and the Baptist Church.

Dr. Wade died August 16, 1970, in Hot Springs. He is survived by his wife and a son, Dr. H. King Wade, Jr., both of Hot Springs. Dr. Wade, Jr., was president of the Arkansas Medical Society in 1962-63; his installation represented the only time in the history of the Arkansas Medical Society when a past president of the Society witnessed the inauguration of his son as president of the Society.

Dr. Glen McKenzie Holmes

Dr. Glen McKenzie Holmes of Little Rock died at the age of 83 on October 18, 1970.

Dr. Holmes was a graduate of the University of Arkansas School of Medicine in 1910. Prior to his retirement in 1958, he had served on the staffs of the Arkansas Baptist Hospital, St. Vincent Infirmary, and the Arkansas Children's Hospital.

Dr. Holmes was a member of the Pulaski County and Arkansas Medical Societies, the American Medical Association, and was a Fellow of the American College of Surgeons.

He is survived by his widow, Mrs. Lucille Hargraves Holmes, three daughters, and five grandchildren.

NEW MEMBERS

Dr. Thomas Paul Thompson, Jr.

Garland County Medical Society announces Dr. Thomas Paul Thompson, Jr., as a new member.

Dr. Thompson was born in Texarkana, Texas and graduated with the B.A. degree from Hendrix College in Conway in 1952. His M.D. was conferred by the University of Arkansas School of Medicine in 1956. Dr. Thompson did his internship at St. Vincent Infirmary in Little Rock and then completed a three-year residency in obstetrics and gynecology at the University of Arkansas Medical Center. He received board certification in that specialty in 1966.

After serving two years with the United States Air Force, Dr. Thompson practiced for eight years in Texarkana with the Southern Clinic of that city.

Dr. Thompson is a member of the American College of Obstetrics and Gynecology, Texas Medical Association, Arkansas Obstetric and Gynecology Society and the Texas Obstetric and Gynecology Society.

Now associated with the Burton-Eisele Clinic, 101 Whittington, in Hot Springs, Dr. Thompson's type of practice is obstetrics and gynecology.

Dr. Mahlon O. Maris

Dr. Mahlon O. Maris is a new member of the Boone County Medical Society.

Born in Little Rock, Dr. Maris received his B.A. degree from Hendrix College in Conway in 1936. He was a 1967 recipient of the M.D. and B.S. degrees from the University of Arkansas School of Medicine. Dr. Maris completed his internship at Kessler Air Force Base Hospital in Myrtle Beach, South Carolina before serving a year's tour of duty with the Air Force in the Republic of South Vietnam.

He is a general practitioner with his office address listed as Boone County Medical Center, 651 North Spring, Harrison.

Dr. Doyle O. Kinder

Dr. Doyle O. Kinder is a new member of the Baxter County Medical Society. Dr. Kinder was born in Sturkie, Arkansas and attended Little Rock University to obtain his premedical education. He was graduated from the University of Arkansas School of Medicine in 1969.

Dr. Kinder did his internship at the Arkansas Baptist Medical Center in Little Rock.

Dr. Kinder is in general practice at 353 East Eighth Street in Mountain Home.

Dr. Reece Lewis Crow, Jr.

Jefferson County Medical Society announces Dr. Reece Lewis Crow, Jr., as a new member.

Dr. Crow was born in Sacramento, California and attended the University of Arkansas in Fayetteville where he graduated with his B.A. in 1956. He was a 1960 graduate of the University of Arkansas School of Medicine. Dr. Crow did his internship at Medical College of Virginia, located at Richmond, Virginia. A residency in general surgery was completed at Charity Hospital, New Orleans, Louisiana from 1962-1966. A residency in chest surgery was also done there during 1966-67. Subsequently, he held a fellowship in vascular surgery at St. Luke's and Methodist Hospitals located in Houston, Texas.

Dr. Crow served two years with the United States Navy, holding the rank of commander. His type of practice is thoracic and cardiovascular surgery. Board certified, Dr. Crow's office is at 1724 Doctors Drive, Pine Bluff.

Dr. Orman Winfield Simmons

Pulaski County Medical Society announces Dr. Orman W. Simmons as a new member. A native of Cross County, Dr. Simmons received his pre-medical education from the University of Arkansas in Fayetteville where he graduated in 1959. He received his M.D. from the University of Arkansas School of Medicine in 1963. Dr. Simmons' internship was done at Arkansas Baptist Medical Center. After serving two years in the United States Army, he returned to the University of Arkansas Medical Center where a residency in obstetrics and gynecology was completed from 1966-1970. Since January 1970, he has been an instructor of that specialty on the faculty of the University of Arkansas Medical Center.

Presently, Dr. Simmons' type of practce is obstetrics-gynecology with his ofices at Suite 612, Baptist Medical Arts Building, 1120 Marshall, in Little Rock.

Dr. Bobby Franklin Flowers

Dr. Bobby Franklin Flowers is the newest addition to the Lee County Medical Society membership roll. Dr. Flowers was born in Manila. He received his B.S. in 1963 from Memphis State University in Memphis, Tennessee. In 1967 he graduated from the University of Tennessee College of Medicine, also located in Memphis.

Dr. Flowers did his internship at Baptist Memorial Hospital in Memphis prior to serving two years active duty in the United States Army.

Dr. Flowers now is a general practitioner and his office address is 100 West Main in Marianna.

Dr. Calvin Richard Cassady

Dr. Calvin R. Cassady is a new member of the Sebastian County Medical Society. Dr. Cassady hails from Nashville, Arkansas and attended the University of Arkansas in Fayetteville, receiving his B.A. in 1958. Graduating from the University of Arkansas School of Medicine in 1962, Dr. Cassady interned at Hillcrest Medical Center in Tulsa, Oklahoma.

From 1963 to 1967, Dr. Cassady served in the United States Navy before returning to the University of Arkansas Medical Center to complete a residency in radiology from 1967 to 1970.

Now board eligible and an associate member of the Arkansas Radiological Society, Dr. Cassady's type of practice is radiology with his offices at the Holt-Krock Clinic, 1500 Dodson Avenue, in Fort Smith.

Dr. Joel E. Parker, Jr.

Dr. Joel E. Parker, Jr., is another new member of the Sebastian County Medical Society.

Dr. Parker was born in Selmer, Tennessee and graduated from Memphis State University, Memphis, Tennessee, B.S. class of 1960. He then entered the University of Tennessee College of Medicine, also in Memphis, and was graduated in 1964.

Dr. Parker did his internship and also a two-year residency in pediatrics at City of Memphis Hospitals. He then served two years in the United States Air Force.

A member of the American Academy of Pediatrics, and board certified, Dr. Parker's type of practice is pediatrics. His office is located at 617 South 16th Street, Fort Smith.

PROCEEDINGS OF SOCIETIES

New Pulaski County Officers Announced

Dr. G. Thomas Jansen has been elected president-elect of the Pulaski County Medical Society, and will serve as president during 1972. Other Society officers are Dr. Purcell Smith, Jr., vice president; Dr. Amail Chudy, secretary, and Dr. Curry Bradburn, treasurer-elect. Dr. James L. Smith will be elevated to president of the Society at the annual installation dinner next month and Dr. Frank T. Padberg will become treasurer.

Mitochondrial Mineralization in Human Myocardium

A. N. D'Agostino and M. Chiga (Univ of Kansas Medical Center, Kansas City)
Amer J Clin Path 53:820-824 (June) 1970

The purpose of this study was to determine the precise localization of intracellular myocardial mineralization after vascular surgery in two patients. By light microscopy, the calcification was represented by discrete basophilic granules. Alizarin red S and von Kossa preparations confirmed the presence of calcium salts. Myocardial tissue from the paraffin blocks and formalin-fixed autopsy tissue were examined by means of the electron microscope; the principal site of mineralization was within mitochondria. The crystalline appearance of the intramitochondrial deposits suggested the presence of hydroxyapatite. The exact mechanism involved in this deposition is not known.

PERSONAL AND NEWS ITEMS

Dr. Kutait President-elect of AAGP

Dr. Kemal E. Kutait, Fort Smith, was recently chosen president-elect of the Arkansas Academy of General Practitioners. He will become its president in the fall of 1971.

Currently serving as Chief of Staff at St. Edward Mercy Hospital in Fort Smith, Dr. Kutait has been a past vice-president of the Academy and a member of its board of directors.

Fort Smith Doctors Aid Education Program Of Local Medical Assistants

The autumn 1970 course of continuing education offered by the Sebastian County Medical Assistants Society has recently appreciated the lectures of Fort Smith physicians T. A. Feild, Jr., and Lawrence C. Price, who discussed medical terminology.

The lecture-seminar series is available to the organization's members, and sessions are being held at Westark Junior College in Fort Smith.

Mercy Hospital of Brinkley Makes Plans For Emergency Room Doctors

Mercy Hospital in Brinkley is making plans to have contract physicians either from Little Rock or Memphis for full time emergency room and out-patient coverage on weekends and holidays. The hospital's objectives, according to administrator Major Bill Riddle, are to have physicians to cover holidays and week-ends to relieve permanent staff doctors from their heavy work loads and providing immediate medical treatment to any person coming into the emergency room.

Gravette Doctor Returns to Practice

Dr. John L. Garrett is returning to his medical practice in Gravette after a two-year absence spent in service of the United States Armed Forces in the Philippine Islands. Dr. Garrett should, by time of this publication, have resumed his practice at the Medical Center in Gravette.

Nurses Addressed by Dr. Casebeer

Dr. Robert L. Casebeer of Rogers was the guest speaker at the meeting of District 14, Arkansas State Nurses Association held at Rogers in October. His subject was "What's New in Opthalmology."

Caduceus Club's New President Installed

Dr. John V. Satterfield, Jr., of Little Rock, was installed as president of the Caduceus Club, succeeding Dr. Francis Henderson of Pine Bluff, at the Club's second annual homecoming program held in Little Rock on October 24th.

Dr. Shuffield New Director on State Chamber of Commerce Board

Dr. Elvin Shuffield of Little Rock has been recently elected by members of the Arkansas State Chamber of Commerce to a three-year term on the State Chamber's Board of Directors. Dr. Shuffield took office at the Board's November 10th meeting held in connection with the Chamber's 42nd Anniversary Meeting held in Hot Springs.

Clinic in Charleston Robbed

The Dr. W. J. Roberts Clinic in Charleston was robbed in October by thieves who took a supply of drugs and a small amount of cash.

Intermittent Severe Mitral Regurgitation

W. Brody and J. M. Criley (Harbor General Hosp, Torrance, Calif 90510)
New Eng J Med 283:673-675 (Sept 24) 1970

Cardiac catheterization in a patient with episodic pulmonary edema, a systolic murmur of varying intensity, and normal heart size revealed transient precipitous elevations of left atrial and ventricular pressures. The magnitude and contour of the left atrial and diastolic left ventricular pressure tracings resembled those seen in acute severe mitral regurgitation. The pressures returned to normal and the murmur disappeared following administration of sublingual isosorbide dinitrate. The diagnosis was intermittent severe functional mitral regurgitation (papillary muscle dysfunction) related to ischemic heart disease. Medical management, consisting of digitalis and isosorbide dinitrate has been employed and the patient has remained essentially asymptomatic over the subsequent 18 months and remains in apparently good health.

RESOLUTIONS

Dr. Glenn M. Holmes

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of one of its esteemed and respected members, Glenn M. Holmes, M.D.; and

WHEREAS, Dr. Holmes devoted himself for many years to the private practice of medicine and to service to the community; and

WHEREAS, the Society wishes to express its appreciation for Dr. Holmes' devotion to the profession;

BE IT THEREFORE RESOLVED: That we take recognition of our loss by making this resolution a part of the permanent minutes of this Society; and

That a copy of this resolution be forwarded to the family of Dr. Holmes as an expression of our sincere sympathy; and

That a copy of this resolution be forwarded to the Journal of the Arkansas Medical Society for publication.

By Action of the Memorials Committee
T. D. Brown, M.D., Chairman
Henry Hollenberg, M.D.
Robert Watson, M.D.

Dr. Louis P. Good

WHEREAS, Death has recently claimed our Friend and Fellow Physician and Member, Dr. Louis P. Good, and

WHEREAS, Dr. Louis P. Good has worked among us in our profession for over forty years, and has distinguished himself as a Physician and Surgeon not only locally, but over a wide area; as an Organizer of an outstanding clinic; as a good Christian man, and prominent and respected Citizen of our City; and as a Member of the Board of Directors of the Wadley Hospital for many years, including its early formative period.

THEREFORE: Be it resolved that We, the members of the Miller-Bowie County Medical Societies, are deeply grieved personally by the loss of our Friend and Co-worker.

AND BE IT FURTHER RESOLVED: That Texarkana and our surrounding area has lost a most valuable Citizen and Physician, whose memory is an inspiration to us all.

AND WE DIRECT: That a copy of this resolution be spread upon the minutes of our Society; another copy be sent to his family; and another copy be furnished to the public press.

Signed:
/s/ Charles C. Stuart, M. D.
/s/ A. G. Goesl, M. D.
/s/ Jack W. Harrison, M. D.
Committee
Bowie-Miller County Medical Societies
/s/ R. H. Chappell, M. D.
Secretary

Dr. H. King Wade, Sr.

BE IT RESOLVED that the Garland County Hot Springs Medical Society pay special tribute to our recently departed member, Dr. H. King Wade, Sr.

Dr. Wade possessed a national reputation in the field of Urology and was held in high esteem by all of us that were associated with him during his professional life.

Mr. Robert S. Dean, gifted editorialist and old friend, wrote a most impressive tribute that appeared in the Sentinel Record on August 23, 1970. This editorial was excellent, and it so well expressed his many accomplishments that it is, therefore, believed that this editorial in its entirety should become a matter of record in the archives of our Society.

BE IT FURTHER RESOLVED, that a copy of this Resolution together with a copy of the same editorial, be sent to his wife and family, to the State Medical Journal, and be spread on the minutes of the Society.

A Tribute to
Dr. H. King Wade, Sr.

Editor
The Sentinel-Record:

The many achievements and contributions of Dr. H. King Wade, Sr., speak eloquently for themselves but more needs to be said in appreciation and memory of a man who richly endowed his city and state with his gift of healing talent, devotion to service, and almost limitless energy.

An impressive testimonial to Dr. Wade's skills as a physician and surgeon is the long list of local, state, regional and national honors conferred upon him by his fellow practitioners and particularly in his specialized field of urology. Another recognition was his appointment to various boards and commissions dealing with health and medicine.

However, the finest tribute of all was the overflow turnout of citizens at his funeral last Tues-

day. They came from all walks of community life, and a deep sense of loss permeated the gathering.

Dr. Wade's exemplary character and warm human values were evidenced in a number of ways.

His preeminence as a urologist attracted patients from far and wide. He could have been selective in his clinentele and remained busy. However, he chose to treat all that came to him in need of his special skills. He worked long hours and often his chief reward was a satisfaction that comes only from helping others.

His innate friendliness and concern transcended a purely professional relationship between doctor and patient.

He carried his honors lightly and with a sense of humility, ever mindful that his profession was a solemn obligation.

Throughout the years, Dr. Wade maintained a firm belief in the healing properties of the Hot Springs thermal waters. He was a strong advocate of reviving and revitalizing the declining bathing industry. As a young physician in the days before the so-called miracle drugs, he had witnessed benefits that the sick and lame derived from those waters.

Dr. Wade's activities extended far beyond the medical field. They covered a wide range of civic, youth, church and fraternal interests — all in the service of his God and fellow man.

He was the last active charter member of the Hot Springs Kiwanis Club in which he proudly held a 46-year perfect attendance record. The club was to have honored him last Wednesday night for that unique record.

Death has written finis to the life works of Dr. H. King Wade, Sr., but his distinguished name is carried on in the field of medicine by a second and a third generation.

Hot Springs and Arkansas will miss Dr. Wade as a rare citizen and physician but can be grateful as chief beneficiaries of a long life well spent.

R. S. Dean
127 Woodbine Street

Cortisol and Growth Hormone Secretion in Relation to Linear Growth: Patients With Still's Disease on Different Therapeutic Regimens

R. A. Sturge et al (Faircrouch, Sussex, England)
Brit Med J 3:547-551 (Sept 5) 1970

Linear growth and the ability to secrete growth hormone and cortisol were studied in 20 patients with Still's disease on various therapeutic regimens. Growth retardation occurred in patients on daily corticosteroid therapy but was not seen in two patients treated with alternate-day prednisone or corticotropin from the outset. Severe growth retardation in patients on daily prednisone was at least partially reversed by reducing the dose or changing to alternate-day corticotropin. Growth hormone secretion in response to insulin hypoglycemia was normal in all patients. Basal plasma cortisol levels and the response to insulin hypoglycemia were reduced in patients on daily prednisone, but normal in patients on alternate-day prednisone. Patients on alternate-day corticotropin, who had previously received prolonged daily corticosteroid therapy, had normal basal plasma cortisol levels but a subnormal response to insulin hypoglycemia.

Changes in Gut Flora Following Cephalexin Treatment

H. Gaya, P. I. Adnitt, and P. Turner (St. Bartholomew's Hosp, London)
Brit Med J 3:624 (Sept 12) 1970

Eighteen patients with urinary tract infection were treated with 0.5 to 1.0 gm cephalexin every six hours for 14 days. Serum and urine cephalexin levels were measured during the second week of treatment. Absorption was variable, the maximum serum level occurring between 30 minutes and two hours after administration, and urinary excretion varied between 29% and 89% of the administered dose. Serum cephalexin levels at one hour after 1 gm cephalexin ranged from 1 μg/ml to 45 μg/ml. A significant number of patients became fecal carriers of *Pseudomonas aeruginosa,* compared with patients on no antibiotic treatment and four cephalexin-treated patients acquired a strain of *Pseudomonas* known to be present in hospital diet kitchen food at that time. Cephalexin treatment may facilitate gut colonization with *P aeurginosa.* Furthermore, hospital food may be the source of this organism which is a potential cause of hospital infection.

COUNCIL OF THE ARKANSAS MEDICAL SOCIETY: MINUTES

The Council of the Arkansas Medical Society met at 12:00 noon on Sunday, October 18, 1970, in the Sam Peck Hotel, Little Rock. Present were: Long, Kennedy, Applegate, Shuffield, Hawkins, Saltzman, Raney, Edwards, P. Gray, Bell, D. Gray, Lazenby, Duzan, Wynne, Harris, Kemp, Bethel, Orr, Kolb, Henry, Chudy, Wilkins, Whittaker, Verser, Winston Shorey, Edgar Easley, Nils Pehrson, John Herron, George Mitchell, Mr. McLyle Zumwalt, Lindsey Miller, William J. Flanigan, Mr. Schaefer, and Mr. Berry.

The Council transacted business as follows:

I. Chairman Long introduced Mr. Zumwalt, Director of Projects and Planning at the Arkansas Baptist Medical Center, and Nils Pehrson, president of the Arkansas Society of Pathologsts, guests of the Council.

II. The Council approved the nomination of Robert F. McCrary to serve on the Seventh Councilor District Professional Relations Committee in place of Jack W. Kennedy.

III. The Council confirmed the Executive Committee action designating Ben Saltzman to represent the Society at a meeting on Environmental and Public Health in San Antonio.

IV. The Council requested Dr. Shuffield and Mr. Schaefer to attend an AMA meeting on quackery to be held in Scottsdale, Arizona. In case Dr. Shuffield cannot attend, Mr. Warren was designated as his alternate.

V. The Council elected the following men to serve on the fee committee:

Representing Internal Medicine: W. Sexton Lewis, Little Rock; Pediatrics: Lloyd R. Warford, Little Rock.

VI: The following were selected for the subcommittee of sub-specialties and specialties represented by a limited number of Society members:

Representing Thoracic Surgery: Carl L. Williams, Fort Smith; Plastic Surgery: T. H. Allen, Little Rock; Gastroenterology: T. J. Smith, Little Rock; Pulmonary Diseases: John C. Schultz, Little Rock; Pediatric Allergy: Kelsy Caplinger, III, Little Rock.

It was the decision of the Council that these sub-committee members may be called upon as deemed necessary by the fee committee for peer review of cases involving a particular specialty field.

VII. Upon the motion of Kolb and Orr, the Council approved Dr. Shuffield's suggestion that the name of the fee committee be changed to the Professional Services Review Organization.

VIII. Upon the motion of Saltzman and Kolb, the Council voted to approve the State Medical Board secretary's developing a plan for the admission of foreign graduates to practice medicine in Arkansas. Said plan is to include requirements for American experience or education prior to receiving a license.

IX. Heard Mr. Zumwalt explain the need for Medical Society support for the statewide kidney disease program. Upon the motion of Stanley Applegate and Payton Kolb, the Society headquarters was directed to address a letter to the Regional Medical Program supporting and approving the program. The headquarters office was also directed to write the county medical societies recommending similar action.

X. Dr. Winston K. Shorey, chairman of the Annual Session Committee, reported on plans for the coming Annual Session. The Council approved the following suggestions of the committee:

1. The Arkansas Medical Society will host a luncheon for senior medical students during the meeting.

2. Monday evening party to be arranged by Dr. Kennedy at the Vapors will include a dinner paid for individually at the club by those attending.

3. Upon payment of a registration fee, nonmembers will be admitted to the scientific program and exhibits only. Non-member faculty at the University of Arkansas School of Medicine will be considered as invited guests for this year only. This exception was made because the faculty will be furnishing the program at this meeting.

4. Upon the motion of Saltzman and Raney, the Council voted to recommend to the Annual Session Committee that it consider elimination of the golf tournament at future meetings.

XI. Upon the motion of Saltzman and Kemp, the Council approved Dr. Kennedy's suggestion that, in the future, the Council invite three junior medical students, three senior medical students and the president of the Arkansas Chapter of the Student AMA to the first Council meeting of the Annual Session as well as to all meetings of the House of Delegates.

XII. Upon the motion of Kennedy and Saltzman, the Council approved Dr. Kennedy's sug-

gestion that a Health Manpower Commission be formed — composed of the following:

Co-Chairmen: Francis M. Henderson, Pine Bluff; Lee B. Parker, Fayetteville.

President-elect of the Society: Stanley Applegate, Springdale.

Chairman of the Society's Committee on Public Health: Ben Saltzman, Mountain Home.

Chairman of the Society's Legislative Committee: Elvin Shuffield, Little Rock.

Chairman of the Society's Committee on Medical Education: (Dr. Parker).

Chairman of the Society's Committee on Continuing Education: George F. Wynne, Warren.

Chairman of the Society's Committee on Hospitals: Art B. Martin, Fort Smith.

Chairman of the Society's Committee on Liaison with the Nursing Profession: Frank Padberg, Little Rock.

President, Woman's Auxiliary to the Arkansas Medical Society: Mrs. Lynn Harris, Hope.

Chairman, Health Careers Committee, Woman's Auxiliary to the Arkansas Medical Society: Mrs. A. S. Koenig, Fort Smith.

Representative of the Arkansas State Medical Assistants Society.

Representative of the Arkansas Hospital Association.

Representative of the Arkansas State Department of Public Health.

Coordinator of the Arkansas Regional Medical Program: C. W. Silverblatt.

Representative of the University of Arkansas Medical Center: John W. Dennis, Vice President for Health Sciences.

Ex-officio:

Other members of the Executive Committee of the Arkansas Medical Society.

Executive Vice President of the Arkansas Medical Society.

Liaison and consulting members:

The Society representative to the Health Careers Council: James Weber, Jacksonville.

One Society representative to the Advisory Council of the Arkansas Health Planning Program: Ernest H. Harper, North Little Rock.

A representative of the Arkansas Society of Pathologists.

Liaison with the Arkansas Dental Association.

Liaison with the Arkansas Pharmaceutical Association.

XIII. Nils Pehrson discussed proposed legislation to license clinical laboratory personnel. Upon the motion of Orr and Duzan, the Council voted to refer the legislation to the legislative committee for whatever action it deems proper.

The Council adjourned at 2.30 P.M.

APPROVED: C. C. Long, M. D.
Chairman of the Council

Carbenicillin Therapy of *Pseudomonas* and Other Gram-Negative Bacillary Infections

T. A. Hoffman and W. E. Bullock (Univ of Rochester School of Medicine and Dentistry, Rochester, NY 14603)

Ann Intern Med 73:165-171 (Aug) 1970

The activity of carbenicillin against *Pseudomonas aeruginosa* in vitro and its clinical effectiveness when used as the sole antibiotic treatment of serious infections were evaluated. Seventeen patients with serious *Pseudomonas* infections and three patients with other gram-negative bacillary infections were treated with carbenicillin. Although most patients showed improvement, only six were cured. The initial pathogenic species was not eradicated from 13 patients, and 5 relapsed due to *P aeruginosa* with marked resistance to carbenicillin. The majority of *P aeruginosa* isolated from patients after therapy were markedly resistant to carbenicillin (minimum inhibitory concentration, 125μg/ml to > 500μg/ml). Superinfections were noted in six patients and were usually caused by *Klebsiella-Enterobacter-Serratia* or *Candida* species. Manifestations of hypersensitivity to carbenicillin included drug fever and eosinophilia. Seizures were induced in two azotemic patients receiving 4 gm carbenicillin per day, and pulmonary edema developed in one patient who was receiving 24 gm of carbenicillin per day.

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When Is the Last Time You Made This Diagnosis?

Frederick T. Fraunfelder, M.D., and Frederick H. Roy, M.D.*

There are few diseases which affect 2.0% of people over 40 years of age. One of these is the number one cause of blindness in America—Glaucoma. If there is a family history of glaucoma in this patient there is a 16% chance glaucoma will develop. There are over 18,000 cases of glaucoma in the State of Arkansas with a minimum of 40% of these cases undiagnosed.[1] Since 62 of the 75 counties in Arkansas do not have an ophthalmologist the burden of suspicion for this diagnosis falls on the general practitioner and the internist.

Glaucoma is a disease in which the intraocular pressure is elevated. The two major types of glaucoma are called narrow angle and open angle (Figure 1). The fluid which bathes the inside of the eye and the lens is produced by the ciliary body and leaves the eye by passing out the trabecular meshwork. In narrow angle glaucoma or "acute" glaucoma, the iris prevents the fluid from leaving the eye by blocking the outflow channels. This results in a rapid increase in intraocular pressure which may result in severe ocular pain.

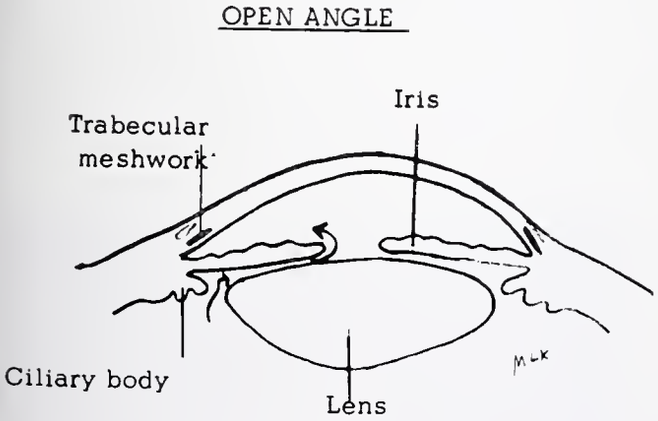

Figure 1
Cross section of an eye: A. Open angle, B. Closed angle.

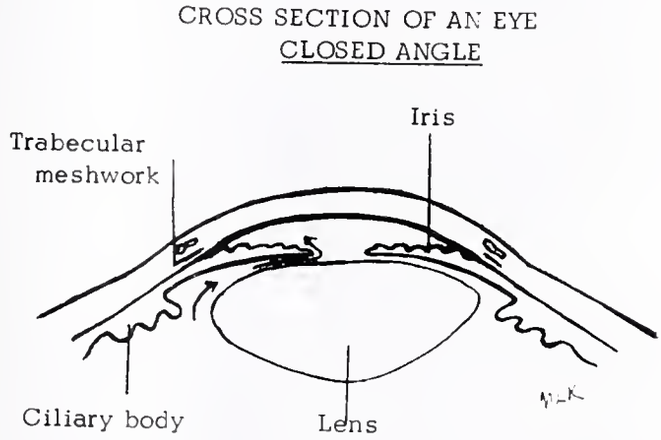

Figure One B

an infected eye, steamy cornea, nausea, and vomiting.

In open angle or "simple" glaucoma there is a slow rise in pressure reaching levels much lower than in acute glaucoma.[2] The defect in open angle glaucoma is felt to be primarily in the trabecular meshwork with impedance of aqueous outflow. The reason for the defect in this "drainage" system is unknown. This type glaucoma comprises 85 to 90% of all cases of glaucoma. Open angle glaucoma is most often bilateral, insidious in onset, and slowly progressive. There are no symptoms until visual impairment occurs, not infrequently too late to salvage useful vision. Patients do not seek treatment until late in the disease because it is painless and their central vision remains good since the peripheral field is first affected. It is therefore the physician's responsibility to diagnose glaucoma before irreversible optic nerve damage has occurred. Early diagnosis and treatment are essential since most visual field loss is irreversible.

The best means of detecting glaucoma is a high degree of suspicion and tonometric examination with the Schiotz tonometer (Figure 2). It can be made part of the general physical examination by internists and general physicians, but is a must if optic nerve changes are noted. That each com-

* From the Division of Ophthalmology, University of Arkansas Medical Center and Veterans Administration Hospital, Little Rock, Arkansas.
Reprint requests to 4301 West Markham Street, Little Rock, Arkansas 72205 (Dr. Fraunfelder).
This investigation was supported in part by USPHS Grant-in-Aid No. NB 10041 from the National Institute of Health.
* House of Vision, 135-137 North Wabash Ave., Chicago, Illinois 60602. HV3702 Tonometer, with weights, test blocks, straight scale, tested by Electrical Testing Laboratories. $50.00.

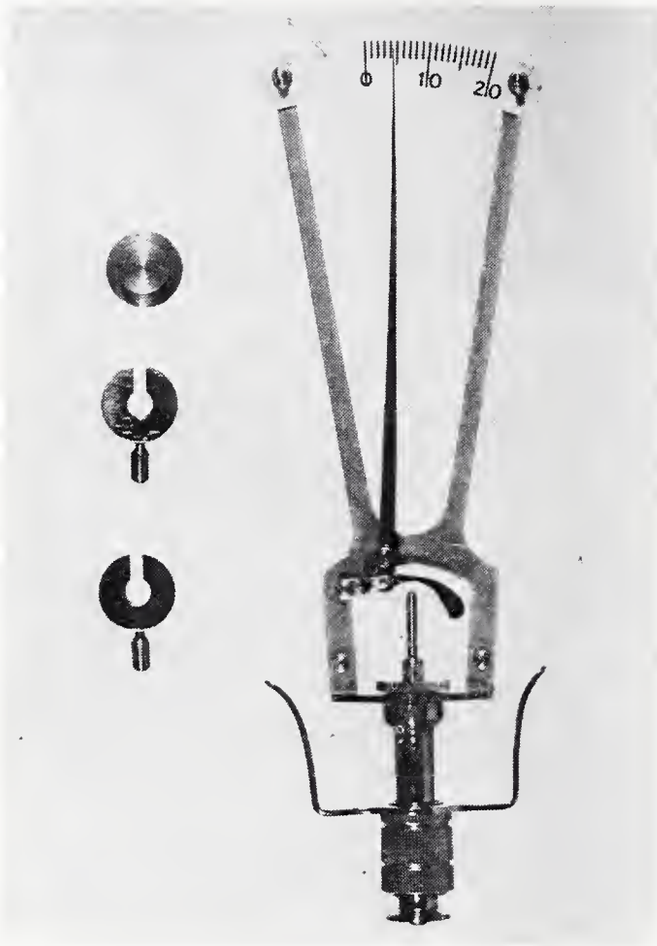

Figure 2
Schiotz tonometer and weights.

plete physical examination should include tonometric examination is ideal, but not practical. Ideally pressure measurements should be taken every three years on all persons over 20 years old or every year if there is a family history of glaucoma. It should be performed in patients with a family history of glaucoma, in those with abnormalities of the optic disc, and especially in patients over 40 years of age who are not seen regularly by ophthalmologists.

The Schiotz tonometer can be obtained from the House of Vision* (Figure 2). The opthalmologist in your local area or the eye clinic at the University of Arkansas Medical Center will be happy to demonstrate the use of the Schiotz tonometer. Tonometry should be deferred, however, on any person with an infected eye, as the infection might spread to other patients with the tonometer. An anesthetic solution instilled in each eye such as proparacaine hydrochloride (Ophthaine[R], Ophthetic[R]), 0.5% or tetracaine hydrochloride (Pontocaine[R]), 0.5%. The patient lies on his back and is asked to stare at a spot on the ceiling with both eyes or at a finger placed directly in his line of gaze over his head. The Schiotz tonometer is then placed on the corneal

Figure 3
Measuring the intraocular pressure with a Schiotz tonometer.

surface of each eye and the scale reading taken from the tonometer (Figure 3). By referring to a chart that converts the scale reading to mm Hg, the intraocular pressure is determined. If the scale reading is four or less, the 7.5 and 10 gram weights are added separately to find the exact intraocular pressure. With a pressure of 25 mm Hg or higher, glaucoma may be present or impending.

The next most important diagnostic step is the ophthalmoscopic examination for pathologic cupping of the optic disc.[3] Optic disc changes are an important finding. The temporal disc margin thins, becomes pale, and the physiologic cup gradually becomes wider and deeper (Figures 4, 5, and 6). The large vessels become nasally displaced in this cup and the disc becomes atrophic (light gray rather than pink). If the physiologic cup is over 40% of the total diameter of the disc, one must rule out glaucoma, although a significant number of these eyes are normal and the large cup is often on a hereditary basis. With either an intraocular pressure greater than 24 mm Hg or optic disc changes, the patient should be referred to an ophthalmologist for further diagnostic tests.

The treatment of choice for narrow angle glaucoma is surgical, i.e., peripheral iridectomy. The

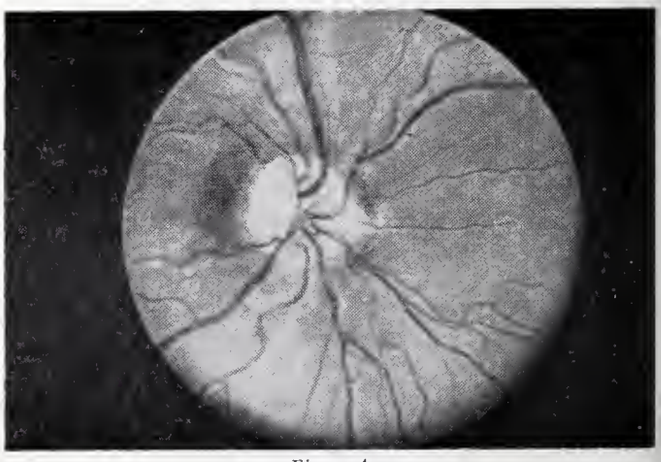

Figure 4
Normal disc.

Figure 5
Incipient glaucoma—the physiologic cup is over 40% of the total diameter of the disc.

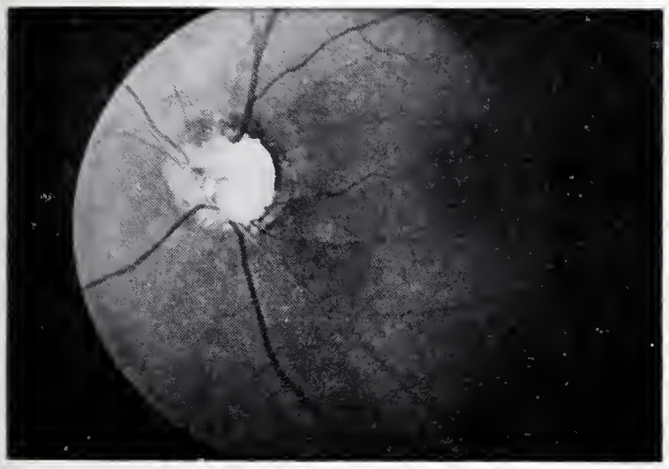

Figure 6
Glaucomatous cupping—the temporal disc margin (right) is thin and pale and the physiologic cup is much wider and deeper than normal. The large vessels are nasally displaced in the optic cup and the disc has become pale and atrophic.

treatment of choice for open angle glaucoma is medical and consists of pilocarpine, epinephrine, or carbonic anhydrase. Surgical treatment is primarily indicated in unreliable persons who fail to take medication and in those uncontrolled on maximum medical therapy.

Summary

Chronic glaucoma is a common disorder with an asymptomatic, insidious course leading to blindness. Early detection is essential to prevent irreversible visual field loss. Since currently over 40% of glaucoma cases are undiagnosed, the Schiotz tonometer and the ophthalmoscopic optic disc examinations are necessary as part of the general physical examination. With either an intraocular pressure greater than 24 mm Hg or optic disc changes, the patient should be referred to an ophthalmologist for further diagnostic tests.

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Late Results of Myocardial Revascularization

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Ann Thorac Surg 10:132-140 (Aug) 1970

Various surgical revascularization procedures were performed on a group of 122 patients. Sixty-four additional patients were treated medically. All patients had statistically comparable arterial disease, and all patients in both groups were followed for the same period of time. Among the 122 surgically treated patients there were seven operative deaths and three late deaths. Among the 64 medically treated patients, one death occurred within one month after operation, and there were 11 late deaths. Of the 113 surviving surgical patients, eight (7%) had late myocardial infarction. Among the 64 medically treated patients, there were 14 late myocardial infarctions, an incidence of 22%. The decreased incidence of myocardial infarction in the surgical group was statistically significant. The decreased incidence of late mortality among surgical survivors was highly statistically significant when compared to the medical group. When surgical mortality was combined with late deaths in the group of patients treated surgically, the summary relative odds of mortality were 0.43:1 lower in the surgically treated patients, but this difference was not definitive by statistical analysis.

Carotid Body Tumors
Diagnosis and Surgical Management

Harwell Wilson, M.D.*

Carotid body tumors account for only a small percentage of masses found in the cervical region. However, because of their unusual nature and certain problems related to diagnosis and surgical treatment these neoplasms have for a long time been of great interest to surgeons. In previous publications the author has reviewed the biological nature of carotid body tumors as well as outlined newer methods of diagnosis and surgical treatment.[1,2,3,4] More recently, we have summarized our experience and the experience of others related to one unusual feature of these unusual tumors, namely, the tendency for some of these tumors to be familial and when they are familial, the tendency for them to be bilateral. We have also previously outlined the experience with 19 such tumors treated in the Department of Surgery at the University of Tennessee.

Carotid body tumors may be classified as one of a group of tumors commonly designated as chemodectomas. Such tumors are usually named according to the site of origin, the most common of which is the bifurcation of the carotid artery. Chemodectomas may also be found at the Glomi Jugulare, at the aortic arch arising from aortic bodies, in the retroperitoneum and in conjunction with the hypoglossal nerve. Conley[5] reports concerning the multicentricity of paraganglionic foci occurring in the head and neck. He reported one patient who had two separate carotid body tumors and two separate Glomus Jugulare tumors. Such separate tumors should be differentiated from metastases.

A summary by Burman[6] stated: (1) The tumors do not secrete epinephrine or endocrine substance; (2) do not yield true chromaffin reaction; (3) have an afferent sensory type of innervation; (4) arise from neural primordia or analage in close association with peripheral nerves; (5) probably function as chemoreceptors responsive to alterations of pH or carbon dioxide concentration in the blood.

The histological nature of carotid body tumors has been described in detail by Costera, Barroso-Moguel and Chevez.[7] The normal carotid body occurs as a flattened pinkish tan mass of tissue measuring 2 to 5 mm in diameter, located on the posterior aspect of the common carotid artery at the site of the bifurcation. Tumors which develop from the carotid body are usually well encapsulated, and frequently surround the arteries, namely, the common, internal and external carotid. On some occasions the tumor is located in the crotch at the carotid bifurcation but does not surround the vessels.

Boyd[8] demonstrated embryologically that the carotid body lies in the adventitia of the carotid body vessels. The media does not become involved in the development of this structure. The current method of surgical treatment, namely, the subadventitial removal of the tumor, is based upon this finding. The extreme vascularity of the carotid body tumor has accounted for many difficulties when surgical excision was attempted. In many instances when the surgeon approached such a tumor severe bleeding ensued and made it necessary to abandon the operation. Indeed, in some instances, control of a simple biopsy site proved to be very difficult.

Malignancy

Some difference of opinion still exists concerning the malignant potential of carotid body tumors. Characteristically, most of these tumors grow slowly over a period of years. They produce symptoms by pressure on adjacent structures and by giving evidence of a slowly growing mass in the

Figure 1
Carotid arteriogram showing marked vascularity of carotid body tumor. Courtesy Wilson Ann. of Surg. 159, No. 6.

* From Department of Surgery, University of Tennessee; City of Memphis Hospitals; and the Baptist Memorial Hospital, Memphis.

neck located near the region of the bifurcation. Most carotid body tumors are benign. However, some have been proved to be definitely malignant as evidenced by local spread to contiguous structures, regional lymph node involvement and occasionally distant metastatic spread has been demonstrated.

Pryse Davis[9] in 1964 concluded: "All these chemodectomas must have a malignant potential if only . . . invasiveness at some stage of their development and prediction of metastatic behavior is difficult if at all possible on histological grounds. A satisfactory separation into benign, locally invasive and malignant metastasizing tumors cannot readily be made on histological appearance alone."

Diagnosis

These tumors are characteristically first noted as painless masses which occur at the bifurcation of the carotid artery. Symptoms may occur from pressure on regional nerves, namely, the vagus, glossopharyngeal, hypoglossal and cervical sympathetic chain. Tenderness over the mass may occur and some patients complain of dysphasia. Some patients have also complained of pain referred to the ear as well as hoarseness and headache. In a few instances pain has been the chief symptom. Encroachment of the tumor on the recurrent laryngeal nerve may produce vocal chord paralysis and swallowing may become difficult with glossopharyngeal nerve involvement. It is still true, however, that most patients present

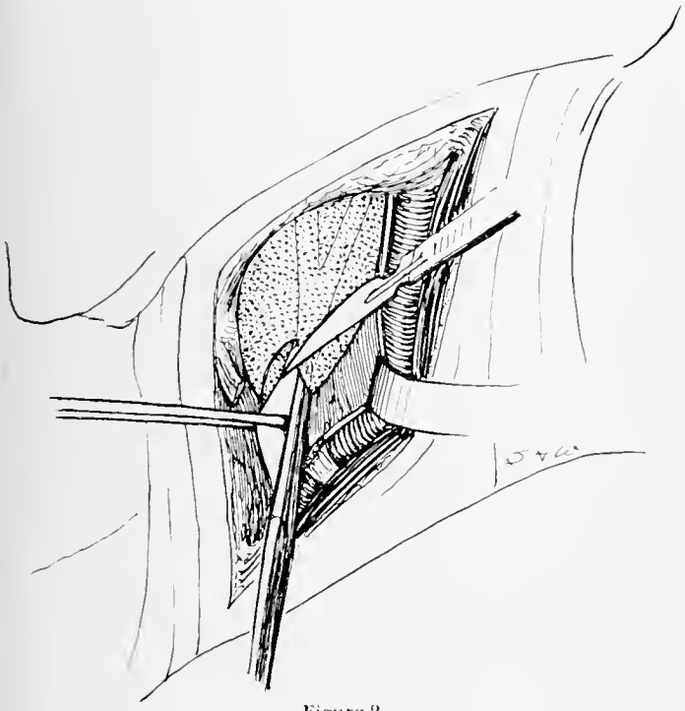

Figure 2
Illustrating subadventitial resection of tumor. Courtesy Wilson Ann. of Surg. 159, No. 6.

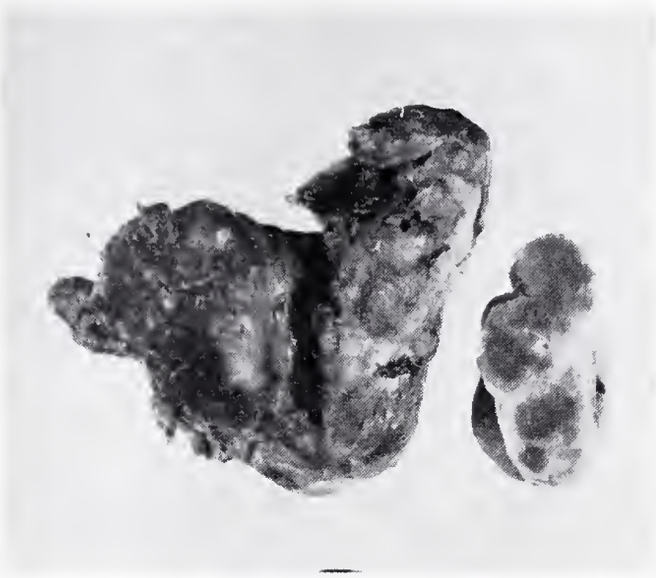

Figure 3
Excised specimen of Carotid Body Tumor showing Channel through tumor made by artery. Courtesy Wilson Ann. of Surg. 159, No. 6.

themselves because of a painless mass which has been present in the neck over a period of time.

The diagnosis is suggested when the surgeon finds a firm, smooth, globular mass in the region of the carotid bifurcation located just below the angle of the jaw. The differential diagnosis includes cervical masses such as branchogenic cysts, metastatic tumor, lymphoma and aneurysm of the carotid artery. The bruit commonly heard over such tumors occurs because of the marked vascularity.

The development of carotid angiography has been most helpful in aiding the correct preoperative diagnosis of tumors of the carotid body. The rich blood supply of the tumor causes it to be clearly outlined in a characteristic fashion in most instances. Frequently one observes the obvious widening of the space between the internal and external arteries. On one occasion we were misled seeing a fairly typical picture which, however, proved to be a 2 cm aneurysm which had arisen by a very small neck from the internal carotid artery just distal to the bifurcation. This aneurysm was successfully removed by our Chief Resident with end-to-end anastomosis of the internal carotid and in our experience this is the only case where we have been misled by our interpretation of the carotid angiogram.

Surgical Management

Certain principles in the management of these tumors should be constantly borne in mind. First it is very important to avoid sacrificing the circulation through the internal carotid artery when one is dealing with a benign tumor. A significant number of patients may be expected to have

paralysis following ligation of the internal carotid artery and this may occur immediately. In other instances where the internal carotid artery is ligated and adequate collateral circulation within the skull presents immediate paralysis there is still a possibility that a propagating thrombus may develop and cause paralysis at a later date. There have been some reports of successful replacement of the internal carotid artery by the use of a graft. However, in the great majority of cases it is possible to remove successfully a benign carotid body tumor without the necessity of sacrificing the internal carotid artery.

The extreme vascularity of such tumors as previously mentioned has often presented a very difficult problem to the surgeon. Gordon Taylor emphasized the method of dissecting these tumors away from the media of the artery since it is known that the blood supply of the carotid body tumor is derived from the adventitial vessels of the artery. Wilson, Farrar, Morfit, Crile and Nelson have emphasized the value of this approach.

The skin incision in small or moderate sized tumors is usually a modified transverse type of incision made in line with the skin creases according to the usual plastic principles. In large tumors it is easier to make an incision along the anterior border of the sternocleido mastoid muscle. Regardless of the type of skin incision used, the cervical fascia is incised along the anterior border of the sternocleido mastoid muscle and this muscle is retracted laterally exposing the carotid sheath. It is important to secure proximal and distal control of the vessels involved prior to the beginning removal of the tumor. Tapes are passed about the common carotid artery below the tumor and about the external and internal carotid arteries above the tumor. It is usually wise to approach removal of the tumor from below by first dissecting down to the media of the common carotid artery. Frequently a small mosquito hemostat may then be passed on the media up beneath a small portion of the tumor. At this point an incision is actually made through a small portion of the tumor down to the media of the carotid vessel. At this time it is necessary for the surgeon to accept a certain amount of brisk bleeding because of the marked vascularity of these tumors. The dissection is continued in the subadventitial plane and as other adventitial vessels are interrupted the blood supply of the tumor becomes obviously less. The point most likely to be troublesome as regards injury to the vessel is the site of the bifurcation of the carotid. Repair of the vessel at this point is also more difficult. However, if proximal and distal tapes have been placed about the vessel, small openings may be closed with fine arterial sutures.

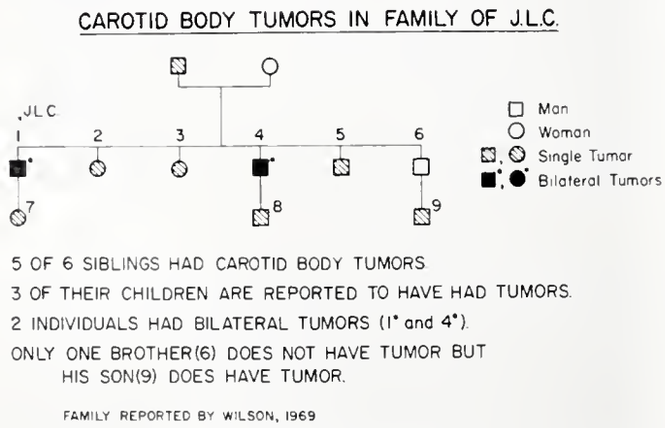

Figure 4
Carotid body tumors in family of JLC reported by Wilson 1969. Courtesy Wilson Ann. of Surg. 171, No. 6.

Familial and Bilateral Characteristics

A characteristic of carotid body tumors is the fact that occasionally such tumors are found in several members of the same family. It is also true that when tumors are found in more than one member of a family, such tumors have more frequently proved to be bilateral. These bilateral tumors may occur simulaneously or at intervals of months or years. In familial cases, all members of the family should have repeated examinations in order that such tumors which develop may be removed while they are still small. When bilateral tumors are found, only one such tumor should be removed at a time. We have reported our experience with bilateral tumors occurring in one family and have also summarized reports from other surgeons interested in the problem. These findings were reported in detail in the June, 1970, ANNALS OF SURGERY.

Summary and Conclusion

Carotid body tumors are characteristically slow growing neoplasms which present as a painless mass in the neck but may produce symptoms as a result of pressure on contiguous structures.

The majority of these tumors are benign. However, some are malignant, giving rise to contiguous spread, regional lymph node involvement and rarely distant metastases occur.

Carotid angiography has been a great aid in establishing the diagnosis preoperatively.

In some instances there has been a familial occurrence of these tumors and when more than

one member of a family is involved, the tumor is more likely to be bilateral.

Excision of a tumor when benign should be carried out by the subadventitial approach and every effort should be made to preserve the integrity of the internal carotid artery.

In rare instances block excision of a malignant tumor may be indicated followed by the use of a graft to replace the portion of the internal carotid which was removed. In the rare instance where the internal carotid has gradually become completely obstructed over a period of time without neurological deficit, one is justified in performing a block resection of the tumor.

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Plasma Digoxin Concentration in Patients With Atrial Fibrillation Measured by Radioimmunoassay

D. A. Chamberlain et al (St. Bartholomew's Hosp, London)

Brit Med J 3:429-431 (Aug 22) 1970

Plasma digoxin concentrations were measured by radioimmunoassay in 116 patients with atrial fibrillation on long-term treatment with the drug, also on 23 patients with evidence of digoxin toxicity. This mean concentration in the subjects with atrial fibrillation was 1.4 mμg/ml compared with 3.1 mμg/ml in the group with digoxin toxicity. An overlap occurred between the therapeutic and toxic ranges, but the data showed toxicity is unlikely to occur with a plasma level below 2.0 mμg/ml. Plasma concentration correlated poorly with resting heart rate during atrial fibrillation, but in patients with good renal function a significant correlation was found with oral dose ($P < 0.001$). No evidence was obtained for increased sensitivity to therapeutic concentrations of the drug in elderly subjects, but the doses required to achieve these concentrations tended to be less than in younger patients.

Prognostic Features in Recovery From Traumatic Decerebration

P. Gutterman and H. A. Shenkin (Episcopal Hosp, Philadelphia)

J. Neurosurg 32:330-335 (March) 1970

Fifty-two consecutive patients with traumatic decerebration were studied. The mortality of decerebrate patients with supratentorial hematomas was greater than in those with direct damage to the brain stem, but the quality of survival was better. The mortality and morbidity were greater with traumatic intracerebral and subdural hematoma than with epidural hematoma. There was progressive increase in mortality with increase in duration of decerebration prior to surgery. Patients who recovered from the decerebrate state usually survived. There was an increase in mortality when decerebration persisted for more than one week, but there were useful survivors after even 45 days of decerebration. Mortality increased as the age of the patient increased. There was no improvement in the quantity or quality of survivors with the use of parenteral corticosteroids in pharmacological doses.

Complications of Transtracheal Aspiration: A Case Report

James Y. Massey, M.D.*

Mrs. C. Y., a 33-year-old Negro female, presented to our emergency room with a three day history of progressively worsening cough and fever. She became disoriented and unresponsive twelve hours prior to admission. No significant prior medical or surgical illnesses were known but previous scratch-testing had demonstrated an allergy to penicillin. She was a "heavy" smoker and a "moderate" consumer of alcohol.

She was disoriented and lethargic at rest but when stimulated became violent and resisted any physical contact. Axillary temperature was 102 degrees, respirations were 24 per minute and the BP was 130/80. Pertinent physical findings included: a large subconjunctival hemorrhage O.D., normal pupils, moderate nuchal rigidity, numerous medium rales over her left anterior lung field, and a normal neurological exam with benign fundi.

Abnormal laboratory data included: WBC-24,400mm,^{3} serum sodium-128 mEq/L, CO_2-18 mEq/L, Cl-92 mEq/L. Other serum chemistries, urinalysis, ECG, and serum enzymes were normal. Chest X-rays demonstrated a left upper lobe infiltrate (Figure 1). After sedation with chlordiazepoxide 100 mg IM and diazepam 10 mg IV, a lumbar puncture revealed normal cerebrospinal fluid and pressures.

Figure 1
Initial chest X-ray revealed a left upper lobe infiltrate.

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An additional 12 mg of diazepam IV was given and a transtracheal aspiration was performed. The neck was slightly extended and the skin prepared with hexachlorophene soap solution followed by merthiolate solution: a small intradermal wheal was raised over the inferior edge of the thyroid cartilage with 1% Lidocaine Hydrochloride. A 14-gauge Bardic intracatheter needle was introduced through the anesthetized skin and directed caudad before piercing the crico-thyroid membrane. The polyethylene catheter was then threaded quickly into the trachea, and the needle was withdrawn. A 30 ml syringe was attached to the tubing and suction applied. Vigorous coughing was stimulated but no sputum could be aspirated through the catheter. This was followed by injecting 3 ml of isotonic sterile saline through the catheter; this provoked more coughing and one ml of sputum was aspirated.[1] The catheter was withdrawn and a small amount of hemorrhage at the site of injection was easily controlled with local pressure for three minutes. No subcutaneous emphysema was present at the injection site immediately following the procedure.

Gram staining of the sputum sample revealed sheets of gram positive diplococci. The patient's pneumonia was treated with cephalothin 8 grams a day IV. Six hours later the patient awoke from her sedation and had to be restrained in bed. She began to hyperventilate and perform Valsavalike maneuvers intermittently. At that time subcutaneous emphysema was observed, extending over the face to the eyelids and down to the clavicles. During the next two hours the subcutaneous emphysema spread over the scalp and down to the iliac crests anteriorly. Respiratory embarrassment developed and was thought to be secondary to tracheal compression from the massive subcutaneous emphysema of the neck. Shortly, the patient's nailbeds became cyanotic and arterial gases revealed alveolar hypoventilation. Tracheal entubation was done orally and she was placed on the Bennett Respirator. A repeat chest film revealed a large left pneumothorax, pneumomediastinum, and the massive subcutaneous emphysema (Figure 2). A chest tube

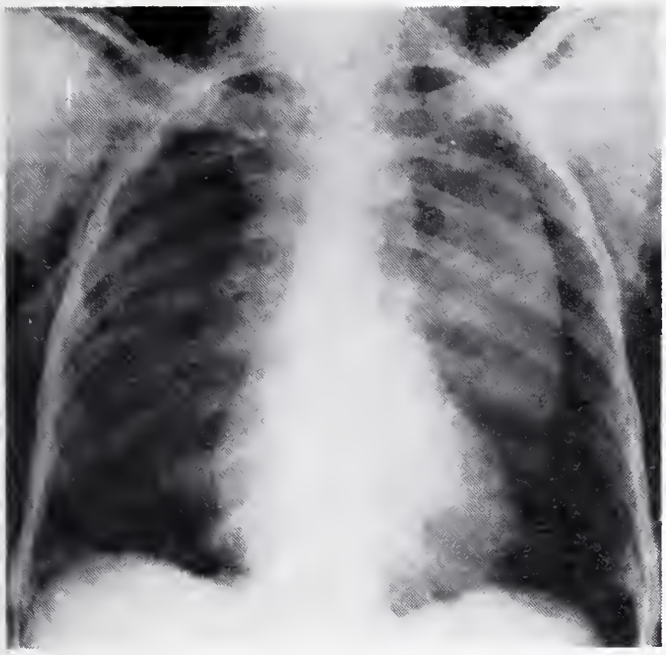
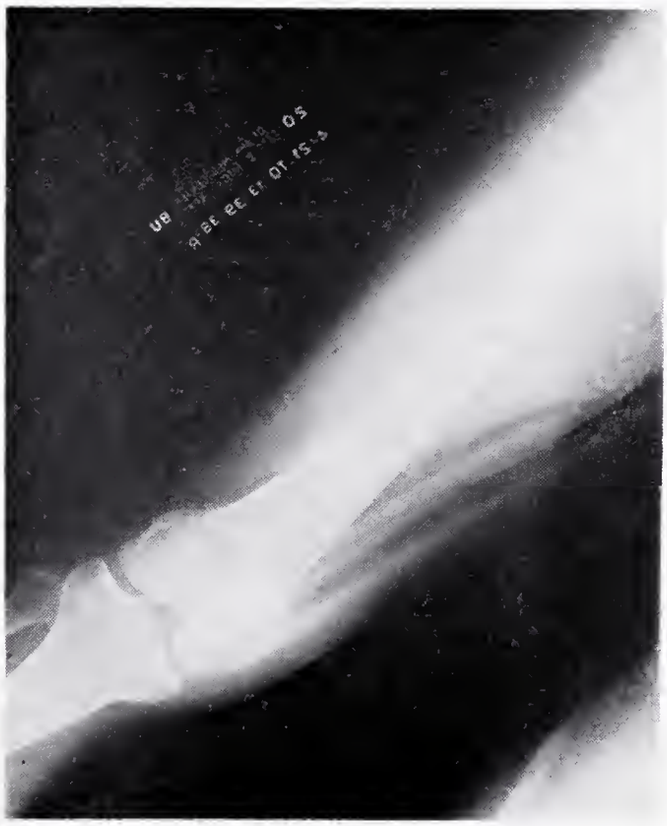


Figure 2
Chest X-ray demonstrating the large left pneumothorax, the pneumomediastinum, and the massive subcutaneous emphysema. Note the air contrast effect of the pectoralis major muscles.

was then placed in the left anterior second intercostal space and connected to a water trap drainage system. The oral endotracheal tube was changed to a nasotracheal tube with cuff and was left in place 30 hours. Repeat X-rays demonstrated complete resolution of the pneumothorax, and the chest tube was pulled after 24 hours without further complication. Follow-up X-rays also revealed a pneumoperitoneum manifested by air under the diaphragm, and subcutaneous emphysema extending from the scalp to the knees (Figures 3, 4, 5). The patient was sedated effectively with morphine sulfate 15 mg IV as needed for restlessness while the nasotracheal tube was in place. The remainder of the patient's ten day hospital course was uncomplicated. The pneumomediastinum and pneumoperitoneum subsided spontaneously before discharge. The pulmonary

Figure 3
X-ray taken shortly after the chest tube was removed showing resolution of the pneumothorax. Note the pneumoperitoneum.



Figures 4 and 5
Extremity X-rays demonstrating the extensive amount of subcutaneous emphysema.

infiltrate resolved and the patient was afebrile for four days prior to discharge. Only a small amount of resolving subcutaneous emphysema remained at discharge.

Review of Literature

Pecora in 1959 proposed transtracheal aspiration as a method of obtaining sputum from the lower respiratory tract for bacteriological studies.[2] Several reports have subsequently confirmed the safety and bacteriologic validity of this procedure.[3,4,5,6] Transient blood-streaked sputum and slight hemorrhage at the injection site are commonly observed but are never of consequence. Mild, localized subcutaneous emphysema is the most common complication. This usually resolves spontaneously, but occasionally may extend to the face and anterior chest wall. The several cases of pneumomediastinum reported all resolved spontaneously without sequelae.[6]

Two patients developed tuberculous granuloma formation in the needle tract.[2] When the procedure is done to obtain sputum, no significant secondary infections have been reported.

Transtracheal catheterization has been used extensively since the late 1940's for other purposes than sputum aspiration. Among these uses are included transcricoid bronchography, transtracheal anesthesia for bronchoscopy, and instillation of a detergent to prevent atelectasis in postoperative patients. Several serious complications have been reported with these latter procedures. Willson in 1959 reported one of each of the following serious complications of transcricoid bronchography: transitory air embolus, extravasation of the contrast material with abscess formation, fatal mediastinal emphysema, and a fatal anaerobic cellutitis.[7] Adriani and Parmley had two complications in 350 transtracheal instillations of anesthetics: one of deep cellutitis of the neck, and one in which the 25-gauge needle broke.[8]

Conclusions

The procedure of transtracheal aspiration for sputum is widely accepted as a relatively safe procedure yielding very valuable bacteriological information. It is not without hazard, however, as illustrated by this patient with several complications: massive subcutaneous emphysema to the extent of tracheal compression and resultant respiratory embarrassment, pneumothorax, pneumomediastinum, and pneumoperitoneum.

It is suggested that the above complications were caused by the patient's violent mental status and subsequent increased intrathoracic pressure. This resulted in a continuous air leak through the small rent in her cricothyroid membrane caused by the transtracheal aspiration. More efficacious use of sedation following the procedure could have possibly prevented these complications.

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SURGERY at the UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE*

*Under the direction of Gilbert Campbell, M.D., Professor of Surgery.

Acute Aortic Insufficiency: A Medical-Surgical Emergency

G. Doyne Williams, M.D., Robert T. Bulloch, M.D., and Gilbert S. Campbell, M.D.*

Fewer cases of infectious endocarditis are now being seen, presumably due to the widespread use of antibiotics. The immediate mortality has also decreased sharply.[1] Nevertheless, a significant number of these patients will have developed valvular damage secondary to the endocarditis and those patients with hemodynamically significant lesions will expire within a few weeks of cardiac decompensation.[2] Consequently, such patients are best managed under the close observation of the medical and surgical services with advance preparations for emergency valve surgery should this become necessary. Several recent reports of emergency aortic valve replacement in patients in progressive failure with active or inadequately treated endocarditis lend support to this course of management.[3,4,5] Three such cases have been successfully managed at the University of Arkansas Medical Center in the past twelve months. Their case histories follow:

Case Histories

Case 1 — L. J., No. 32 20 13

A 68-year-old Negro male had a TUR at the University of Arkansas Medical Center in November, 1969, and in December had "chills, fever, and night sweats for about one week." In April of 1970, the patient developed progressive dyspnea and was readmitted to the University Hospital one month later. Pertinent physical findings included 3+ pedal edema, tachycardia, rales and cardiomegaly. A loud murmur of aortic insufficiency was present and the blood pressure was 130/40. Blood cultures were positive for enterococcus. The patient was treated with ampicillin, streptomycin, digitalis, diuretics and bed rest with marked initial improvement. Three weeks later cardiac failure was less well controlled as evidenced by increasing dyspnea, increasing heart rate and increase in fluid retention despite intensified effort at medical control. Left heart catheterization confirmed gross aortic insufficiency without other valvular involvement. The patient was operated upon with cardiopulmonary bypass one month following admission. All three aortic valve leaflets were found to be scarred and retracted and the valve was excised and replaced with a ball valve prosthesis. The postoperative course was uneventful. Antibiotics were continued and the prothrombin time adjusted with Coumadin to twice normal levels. Two weeks later the patient was discharged to continue oral ampicillin for one month and to receive intramuscular streptomycin from his local physician for two weeks. Currently, he is receiving oral digitalis and Coumadin and has resumed normal activity.

Case 2 — H. S., No. 33 52 08

A 30-year-old white male was transferred to the University of Arkansas Medical Center from his local hospital where he had been admitted 10 days previously for chills, fever, and left arm and facial paresis. The patient appeared acutely ill. His temperature was 103°, he was in cardiac failure, and had left facial and left arm weakness. A prominent murmur of aortic insufficiency was noted. The temperature returned to normal within 48 hours following treatment with sodium nafcillin and streptomycin. A brain scan showed an area of increased radioactivity in the left middle cerebral distribution suggesting infarction.

*From the Departments of Medicine and Surgery, University of Arkansas Medical Center, Little Rock, Arkansas 72201.

Admission chest film and EKG were within normal limits. He was treated with antibiotics, digitalis and diuretics for three weeks and then cardiac compensation became marginal as indicated by an increase in heart size, prominent third heart sound and increasing fluid retention and dyspnea. The paresis had continued to improve and the neurological consultants advised that the cerebral infarction probably would not now be unfavorably influenced by the heparinization necessary for cardiopulmonary bypass. The patient was operated upon as a semi-emergency. The right and left coronary leaflets of the aortic valve were found to be largely destroyed and a ball valve type prosthesis was installed. Postoperatively the patient did well, remained on intravenous antibiotics for an additional three weeks and was discharged on an oral broad spectrum antibiotic for 30 days. He is currently compensated, afebrile, and has resumed normal activity with complete resolution of the facial and arm paresis.

Case 3 — J. S., No. 29 92 05

A 20-year-old Negro male was admitted following a month of mild malaise and fever with past history of a heart murmur having been present for 6 years. Physical examination revealed an acutely ill and febrile patient with right facial weakness and heart murmur suggestive of severe aortic insufficiency. His temperature was 104°, he was moderately decompensated and blood cultures grew alpha streptococcus. He became afebrile within 96 hours on 20 million units of aqueous penicillin plus 2 grams streptomycin per day. Initial brain scan showed a small filling defect in the mid-frontal region which cleared within one week, as did the facial weakness. The decompensation was controlled with digitalis, diuretics, low sodium diet and rest. A tender pulsatile mass developed in the right posterior thigh approximately one month following admission. The area was explored, a mycotic aneurysm of the left profundus femoral artery excised and the wound healed without incident.

Left heart catheterization with angiogram revealed gross aortic insufficiency with no other valvular involvement.

Open heart surgery was done three months following admission and the right and left coronary cusps of the aortic valve found to be severely damaged. A ball valve type of aortic valve prosthesis was installed. Intravenous antibiotics were continued for two weeks postoperatively and the prothrombin time adjusted to twice normal levels with Coumadin. The patient was discharged to continue on an oral broad spectrum antibiotic for one month. He has currently returned to normal activity and his only medication is Coumadin.

Medical Considerations

Acute aortic insufficiency is usually due to bacterial endocarditis involving the aortic valve. Other occasional causes are: (1) Dissection of the aorta (usually seen in hypertensives or in patients with evidence of a connective tissue disorder such as Marfan's syndrome). (2) Non-penetrating trauma of the chest. (2) Rupture or sudden eversion of a valve in hypertensives or in patients with Marfan's syndrome or the floppy valve syndrome.[6, 7]

The time of onset of aortic insufficiency can often be dated accurately. If the patient has endocarditis he will frequently have been under medical supervision and if not will usually have clinical findings that suggest the diagnosis. Other patients will suddenly become aware of forceful heart action or dyspnea. Dyspnea is the dominant symptom and may progress rapidly from mild to severe with pulmonary edema. On physical exam the pulses are quick and bounding. There is a wide pulse pressure characteristic of aortic runoff lesions. Sinus rhythm is usually present. Left ventricular hypertrophy is usually present by both physical examination and on the electrocardiogram. Auscultation reveals a prolonged diastolic murmur heard in the primary or secondary aortic areas. An S-3 gallop is almost always heard.

In the presence of severe failure the above noted signs may be less obvious. Once pulmonary edema has appeared the outlook is extremely poor. Without surgical intervention, approximately 50 percent of patients will die within a month.[8] Medical treatment will usually stabilize the patient for two or more weeks and in those with proven or suspected bacterial endocarditis will allow antibiotic therapy before operation.

The development of acute aortic insufficiency with progressive left ventricular failure is a catastrophic and frequently lethal event. At best, one is left with a patient, frequently young, with a prosthetic valve in place. Bacterial endocarditis may involve and destroy a minimally damaged valve in a patient with insignificant hemodynamic difficulty who may have never required surgery.

Prevention of bacterial endocarditis then becomes of primary importance. Recommendations for antibiotic prophylaxis against bacterial endo-

carditis have recently been summarized.[9,10] The following is a partial list of situations which are associated with bacteremia: oral sepsis, dental manipulations involving the gums, transurethral prostatic resection, urethral catheterization, normal pregnancy, and skin infections. Bacteremia in addition to valvular or endocardial damage, provides the setting in which bacterial endocarditis occurs. The use of antibiotics will reduce the magnitude of the bacteremia; this effect has been logically assumed to prevent endocarditis although statistical proof is lacking.

Antibiotic prophylaxis should be given to patients with valvular or congenital heart disease in the following situations:

Dental. Any dental procedure may result in bacteremia. Prophylaxis may be given as follows: 600,000 units procaine penicillin given intramuscularly 1 hour prior to the procedure and repeated for 2 days. Phenoxymethyl penicillin (penicillin V) 500,000 units every 6 hours by mouth can be used instead of procaine penicillin on the days following the procedure. Erythromycin, 250 mg. by mouth beginning 1 hour before the procedure and continued every 6 hours for 3 days, can be used in patients sensitive to penicillin. Tetracycline taken in the same manner as the erythromycin can also be used.

Genitourinary. Since enterococci are the chief organisms detected after genitourinary procedures, procaine penicillin, 1.2 million units and 1 gm. streptomycin should be given intramuscularly 1 hour before the procedure and repeated at 12 hour intervals for 3 days.

Pregnancy. At the onset of labor 1.2 million units of procaine penicillin plus 1 gm. streptomycin is given intramuscularly and continued daily for 3 days.

Gastrointestinal tract. Generally the same as for genitourinary procedures. For suspected staphylococcal infection use methicillin 1 gm. intramuscularly approximately 2 hours before the procedure and continue for 2 days at 4 hour intervals.

Prosthetic Heart Valves. A present recommendation is oxacillin, 1 gm. given intramuscularly 1 hour before dental manipulation and for 2 days subsequently.

Precautions. Patients should be carefully questioned for previous allergic or toxic reactions to the antibiotics recommended. If any question exists appropriate substitutions should be made. Even if antibiotic prophylaxis is used, the patient should still be carefully followed to determine the effectiveness of such management.

Rheumatic fever prophylaxis. It should be emphasized that patients receiving penicillin or other antibiotics for rheumatic fever prophylaxis are not protected against bacterial endocarditis. The small daily doses of antibiotics required to prevent the group A streptococcal infections associated with rheumatic fever are ineffective against the more resistant bacteria causing endocarditis and a completely different preventive regimen is necessary. Information and booklets summarizing prophylaxis of both bacterial endocarditis and rheumatic fever may be obtained from the Arkansas Heart Association.

When patients develop bacterial endocarditis, early diagnosis and effective antibiotic treatment may prevent valve destruction. It is not the purpose of this report to outline the diagnosis of endocarditis, excellent reviews of this problem are available.[10,11] A high index of suspicion and persistence on the part of the physician caring for patients susceptible to this disease is necessary.

Surgical Considerations

Surgeons are understandably reluctant to suture a dacron and steel prosthesis in an aortic root containing active foci of bacteria. Reoperation and replacement of an infected prosthesis has been done successfully in a few cases, but in many this complication proves to be fatal.[5] The commonly used prosthetic valves have an interface of dacron and steel which results in incomplete healing. Ultimately granulation tissue forms and is exposed to the circulating blood, providing an ideal home for the ever opportunistic bacteria.[12]

Unfortunately, acute aortic insufficiency is not long tolerated, even by the otherwise healthy heart.[13] It is in these cases that the surgeon must weigh the risk of placing a prosthetic valve in the patient incompletely treated with antibiotics against the development of progressive myocardial failure, rapidly approaching irreversibility. One cannot know when complete sterilization of the aortic valve and root occurs, if it ever does. By convention patients are treated with antibiotics for six weeks following negative blood cultures and in the absence of surgically implanted prosthetic materials this has proved adequate. Those patients developing progressive myocardial failure prior to adequate antibiotic treatment force the issue and one must obtain the maximum antibiotic treatment possible without exceeding the heart's ability to survive the strain.

When myocardial compensation seems to be slipping in spite of careful medical management *in the hospital,* valve replacement is the only recourse.

Digitalis and diuretics are discontinued at least 24 hours prior to surgery (48 hours if possible) and potassium supplementation (either oral or parenteral) is continued. All patients who have been on long term digitalis-diuretic regimens receive 40-60 milliequivalents of potassium chloride intravenously on the night prior to surgery and if the serum potassium is below 3.5 on the day prior to surgery 40 mEq. of potassium chloride is added to the pump priming solution. We use a hemodilution perfusion technique and the average 50-60 kilogram adult will require a pump prime of 1500 cc. of dextrose 5% in water to which is added 12½ grams of mannitol, 44 mEq. of sodium bicarbonate, and 40 mEq. of potassium chloride. Should the arterial mean pressure fall below 50 mm. mercury during the perfusion 500 cc. of heparinized whole blood is added to the prime. We routinely perfuse the coronaries via individual silastic balloon catheters during the perfusion which averages 50-70 minutes for an aortic valve replacement in our hands. Coronary artery perfusion, while not practiced by all groups, seems especially desirable in these older hearts many of which contain significant coronary artery disease.

The entire pump prime is slowly returned to the patient at the conclusion of the procedure using central venous pressure as a guide. The prime thus provides many patients with their fluid requirement for the first 24 hours postoperatively and little IV fluid may be given.

All valve patients are mechanically ventilated via a nasal endotracheal tube for the first 24 hours. Frequent blood gas determinations aid in acid-base adjustments and insure adequacy of ventilation. All valve patients are also paced postoperatively via a percutaneous teflon insulated wire sewn to the anterior right ventricle. Most valve patients tend to run slow spontaneous rates immediately postoperatively and their output can be improved by pacing at 80-85/minutes for 24-48 hours. The percutaneous wire is then removed.

Blood replacement is provided as indicated by central venous pressure, loss via chest tube and arterial pressure curve on the oscilloscope monitor. Generally, actual blood requirements will be found to exceed the exactly measured losses. Persons who have been in failure for a long time may have shifted their Starling curve and in many a central venous pressure of 20 centimeters of water is necessary to accomplish a cardiac output sufficient to insure good perfusion and adequate diuresis. The required venous pressure will fall as the heart continues to improve postoperatively.

The electrocardiogram is carefully monitored and increasing numbers of PVC's almost always indicate a low myocardial potassium content. The extrasystoles can be quickly abolished with 10 mEq. KCl. doses given IV in a 4-5 minute period. Post-perfusion patients retain sodium and lose large quantities of potassium in their urine and frequent KCl. replacement is usually necessary. (Post-perfusion urine will average 5-10 mEq. of sodium and 80-90 mEq. of potassium per liter.) Failure to recognize and treat PVC's early can lead to ventricular tachycardia and fibrillation.

Digitalis is given intravenously as soon as the serum potassium is above 4 mEq. The post-perfusion patient is roughly three times as sensitive to digitalis as pre-perfusion and it must be given cautiously. Nevertheless, its use is desirable as most of these hearts will require all the support possible.

After the first 24 hours fluid balance is usually controlled and most patients can be extubated and allowed to breath spontaneously. Here again, frequent blood gas determinations are necessary to evaluate adequacy of ventilation.

Oral feedings are allowed and the patients are gradually moved up to normal food and fluid intake over a 5-7 day period. Weight and serum sodium are carefully monitored and tendencies to retain excessive water controlled with decreased intake, diuretics and decreased dietary sodium. Most valve patients require a strict low sodium diet for 3-5 weeks after which sodium intake can be increased. Digitalis is continued at the discretion of the cardiologist and many patients eventually do not require it. Antibiotics are given intravenously during and after surgery and an oral broad spectrum type with good antistaphylococcal activity is continued for one month.

Summary

Acute aortic insufficiency secondary to infectious endocarditis constitutes a major medical and surgical emergency. Prophylaxis of bacterial endocarditis is discussed. Careful management by both disciplines with previous preparation for immediate valve replacement can salvage many

patients, and the successful management of three such cases is described.

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Myocardial Dimensions and Proportions in Pulmonary Emphysema

A. G. Foraker, C. W. M. Bedrossian, and A. E. Anderson, Jr. (800 Miami Rd, Jacksonville, Fla 32207)

Arch Path 90:344-347 (Oct) 1970

The heart and lungs of 74 men over 50 years of age were assessed, using heart weights and paper-mounted, whole-organ sections. Planimetric measurements of cardiac coronal areas were compared with emphysema severity. The most significant changes occurred only in severe emphysema, suggesting a large reserve factor. The right ventricular myocardial coronal area was increased in severe emphysema, especially apparent in relation to total ventricular myocardial coronal area and heart weight. Right ventricular cavity areas remained unchanged at all levels of emphysema severity. The left ventricular myocardial coronal area was strikingly diminished in severe emphysema, both absolutely and relative to total ventricular myocardial area. The left ventricular cavity was also decreased in advanced emphysema. There is right ventricular work hypertrophy and left ventricular disuse atrophy in severe emphysema.

Abnormal Serum Growth Hormone Response to Exercise in Juvenile Diabetics

A. P. Hansen (Kommunehospitalet, Aarhus, Denmark)

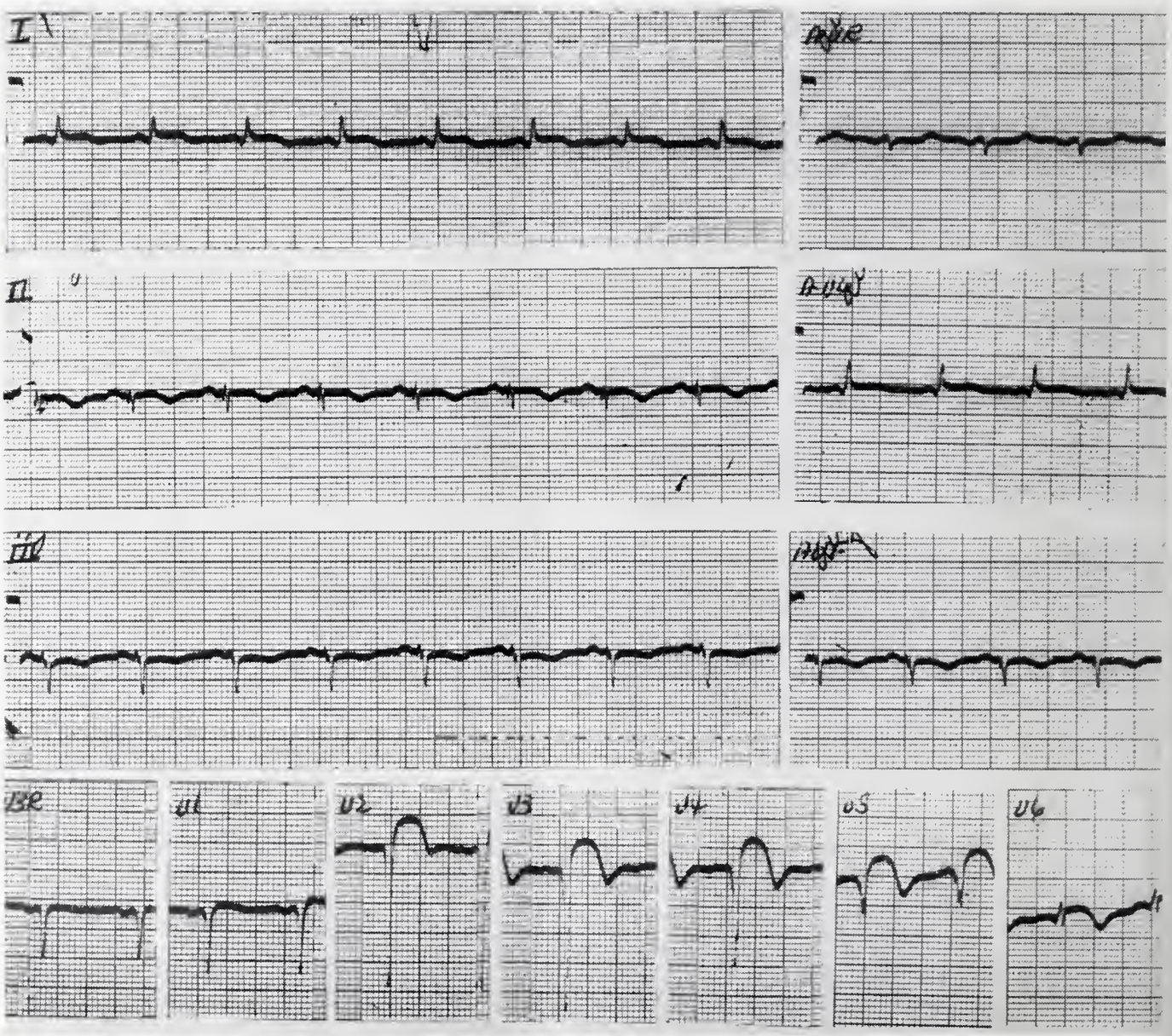
J Clin Invest 49:1467-1478 (Aug) 1970

Groups of male non-obese juvenile diabetics with recent on-set, short-term (1 to 8 years), and long-term (12 to 30 years) diabetes, and comparable nondiabetic controls were studied during exercise experiments. The chosen exercise load, 450 kg/min for 20 minutes never induced changes in serum growth hormone (GH) in the nondiabetic control subjects. An immediate high rise in serum GH followed the commencement of exercise in all diabetics. An abnormal GH response to exercise in diabetics was observed when the patients were in poor control. The change in serum GH pattern during regulation was totally unrelated to the changes in serum free fatty acid patterns. Fasting serum GH levels were also significantly raised in the juvenile diabetics, regardless of the duration of diabetes. Fasting serum GH levels were also significantly decreased during regulation. In the juvenile diabetics a significant increase in serum insulin was observed at the point of time when exercise was concluded.

ELECTROCARDIOGRAM OF THE MONTH

AGE: 51 SEX: Male BUILD: Medium BLOOD PRESSURE: 106/72
CARDIAC DIAGNOSIS: Undetermined.
OTHER DIAGNOSES: None.
MEDICATION: None.
HISTORY: Chest pain day prior to admission, details vague.

See Answer on Page 267



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 267

Ed L. Pointer, M.D.

HISTORY: This is an eight-year-old colored female with history of bowing of femora bilaterally. She was admitted with fracture of left femur just below lesser trochanter.

PUBLIC HEALTH AT A GLANCE

Rabies in Arkansas 1970

Harvie R. Ellis, D.V.M.

The epidemiological data on animal diseases in Arkansas indicates that an epizootic of skunk rabies is in progress for the year 1970. This situation conforms to the national pattern in that skunks are the animal species accounting for the greatest number of laboratory-confirmed cases.

This is especially serious for Arkansas because the climate is such that the skunk is active and plentiful all year. In addition, skunks are highly susceptible to the disease of rabies and once infected can give off a great amount of virus in their saliva. The long incubation period of rabies in skunks adds further complications to the problem of skunk rabies.

Human exposures to the bite of any wild animal should receive careful and immediate management and treatment. The recommended procedure for the management of all wild animal suspects is to sacrifice the animal without delay and send the severed head to the State Hygienic Laboratory, Little Rock, Arkansas, for examination for rabies. Many physicians start the patient on duck embryo rabies vaccine and discontinue the treatment if the examination is negative. Every animal bite exposure usually requires some degree of individual evaluation and management.

The enactment of the Rabies Control Law—Act 11 of 1968—is indicative of substantial progress for Arkansas in the area of rabies control. The owners of dogs and other animals are required by law to take specific action when their animals are involved in a biting incident that exposes humans. The Act outlines responsibilities of certain public officials pertaining to animal bites where people are exposed. Furthermore, it provides for penalties and injunctive powers. The development of a shipping container acceptable to commercial bus lines for transporting severed small animal heads to the laboratory has resolved problems which existed for many years. Commercial bus lines and other public carriers are highly commended for their cooperation and assistance in the movement of these rabies specimens to the State Hygienic Laboratory.

It seems appropriate at this time to compliment the personnel of the State Hygienic Laboratory, Arkansas State Department of Health, Little Rock, Arkansas, for a thorough and efficient operation in the management and examination of animal heads for rabies. The State Laboratory employs two types of tests in the examination of an animal head for rabies; which is the histochemical staining and the immunofluorescent staining tests.

Since Arkansas has a wildlife rabies problem it is very important that all pet animals be vaccinated against rabies. The Arkansas State Law requires that all dogs be vaccinated against rabies each year.

A large amount of significant information can be obtained from the tabulation and shaded map relative to the current rabies situation in Arkansas. The reported and confirmed cases of animal rabies by species are listed for the past five years. The shaded map indicates the specific counties in Arkansas which reported one or more cases of animal rabies during 1969. The *Arkansas Animal Morbidity Report,* which is published each month by Arkansas State Department of Health, contains information on animal diseases occurring in the state, with specific emphasis on those diseases that are transmissible to man.

ARKANSAS STATE DEPARTMENT OF HEALTH

Division of Veterinary Public Health

The shaded portions of this map indicate the counties that have reported one or more cases of rabies during 1969.

ANIMAL RABIES IN ARKANSAS

Species	1966 Cases	1967 Cases	1968 Cases	1969 Cases	(8 Months) 1970 Cases
Bat	4	12	5	5	3
Bobcat	----	----	1	----	1
Cat	5	1	1	1	2
Cattle	15	31	11	4	22
Dog	6	10	4	4	3
Fox	28	17	2	6	7
Goat	----	----	----	----	1
Horse	----	----	----	----	2
Raccoon	----	2	----	----	----
Skunk	36	41	41	24	16
Wolf	----	----	----	----	1
TOTAL	99	114	65	44	58

EDITORIAL

Angioedema & Urticaria

Alfred Kahn, Jr., M.D.

Urticaria and angioedema vary from mild to serious, and most physicians tend to regard these disorders as mild, when in fact they may be life threatening. There has been considerable interest in the recent literature concerning these reactions.

There is an excellent review by J. S. Thompson (Annals of Internal Medicine, Vol. 69, p. 361, August, 1969.) This review discusses etiology and therapy. Thompson states that histamine released from the mast cells is the principal mediator of urticaria and angioedema; there may be other mediators of lesser importance. Some of the factors which may release histamine are complement reactions, immune reactions, chemical agents, and biologic and neurologic mechanisms. The so-called complement cascade, which is the progression of interaction of complement factors, if unchecked by inhibitors, will lead to urticaria. The complement cascade can be initiated by proteins as cryoglobulins, cold agglutinins, etc., which may be seen in lupus erythematoses, multiple myeloma, and other connective tissue and neoplastic disorders.

Thompson lists a number of chemicals which liberate histamine either directly or immunologically; some of the drugs can perform this in vitro; they include opiates, antibiotics, turbocurare, etc. Adrenaline and acetye choline may cause histamine release in susceptible people.

Three immunologic mechanisms that release histamine have been postulated for man. (1) Homocytotrophic antibody that localizes on or near the mast cell that is the reagenic antibody. Upon re-exposure to antigen non-complement esterase is activated that affects the cell membrane bringing about—histamine release. (2) The absorption of soluble antigen antibody complexes on mast cells. (3) Cytotoxic complement fixing antibody that reacts with mast cells.

Among other types of histamine release is that brought about by biologic physical and neurogenic factors; the intermediate steps in the histamine release are not really known. This group includes exposure to sunlight, trauma, etc.

The appearance of urticaria may depend on modifying factors as the number of mast cells and their histamine content; endocrine factors including adrenal steroids, estrogens, etc.; drugs which affect the sympathetic nervous system as beta adrenergic, blockade agents which enhance allergic reactions and alpha adrenergic blockade agents which decrease susceptibility; and infectious disease.

In the diagnosis of urticaria and angioedema, aside from the history complement components can be assayed. Decreased complement is seen with serum sickness, lupus erythematoses, hereditary angioedema, and diseases with abnormal proteins, as cold agglutinins and cryoglobulins. Shin tests for tissue bound reagenic antibody may be helpful. Eosinophilia and basopenia also occur frequently with urticaria. A group of special tests can be found in this review (p. 372).

The author catalogues treatment according to life threatening attacks where he uses beta adrenergic amines and intravenous histamines; subacute attacks which he treats with elimination oral antihistamine, hydroxyzine, beta adrenergic amines, corticords, etc.; treatment of related diseases with corticoids, anti-metabolites, alkylating agents and mercoptans; and the experimental methods including aspirin, alpha adrenergic blockage, etc.

Miller, Freeman, and Akers reviewed chronic urticaria and published their investigations on

50 patients in the American Journal of Medicine. Vol. 44, p. 68, January, 1968. Their cases lasted at least 8 weeks and were mostly young adults. Their chronic cases usually had multiple causes contrasted with acute where they may be one cause. None of their cases were associated with malignancy. Dry skin seemed to be a perpetuating agent in their cases. The etiologic agents, which cause chronic urticaria included: drugs, inhalant allergies, food allergies, infection, cholinergic urticaria, physical allergy, dermographic urticaria, collagen disease, psychogenic urticaria, hereditary angioedema, malignancy, and urticaria pigmentosa.

Of interest is an article in The Journal of Clinical Investigation by Donaldson, Ratnoff, Da Silva, and Rosen (Colume 48, p. 642, April, 1969). They have a factor in the plasma of patients with hereditary angioedema which they describe as having "permeability—increasing activity." The substance is thought to be a heat stabile polypeptide. Its activity did not produce pain or arythema in the human skin. The enzymes or substances which released this permeability factor have not been elucidated. This factor is apparently separate from another proved etiologic mechanism of angioedema in which there is a deficiency in the inhibition of complement factor #1 esterase.

These studies indicate the considerable interest in angioedema and urticaria which is so to speak a bridge between the subspeciality of allergy and clinical medicine although of small importance in many cases, angioedema may be life threatening often enough to warrant a thorough understanding of its etiology and treatment by the practicing physician.

ANSWER—Electrocardiogram of the Month

RATE: 90 RHYTHM: Sinus
PR: .13 sec. QRS: .07 sec. QT: .39 sec.

SIGNIFICANT ABNORMALITIES:
Significant Q in I, oVL, $V_{2,3,4,5}$.
Abnormal RS-T elevations some leads c reciprocal depression in III, oVF.
Abnormal T inversions.

INTERPRETATION: Abnormal
Acute myocardial infarction, extensive, anterior.

PROCEEDINGS OF SOCIETIES

Pulaski County Medical Society Names New President-Elect

Dr. G. Thomas Jansen of Little Rock has been voted president-elect of the Pulaski County Medical Society. He will become president of the Society in 1972.

Greene-Clay County Medical Society Announces New Officers

Elected as officers of the Greene-Clay County Medical Society for 1971 are: Dr. Richard Martin, president; Dr. Lee Shedd, president-elect; Dr. Jack Richmond, secretary; Dr. A. J. Baker, delegate; and Dr. Sam Watson, alternate delegate.

Dr. Brown Speaker at Sebastian County Medical Society Meeting

Dr. James Brown, a Fort Smith neurologist, was a guest speaker at the December meeting of the Sebastian County Medical Society.

Rubella Immunization Continues

In recent months, mass rubella immunization programs have been sponsored and carried out by the Medical Societies of Pulaski and Crawford counties.

ANSWER—Radiology Case of the Month

DIAGNOSIS:
Fibrous dysplasia.

DISCUSSION:
There are cystic areas involving a large portion of both femora with a piling up of cortex on the concave side. "Shepherd's Crook" deformities of the femora are demonstrated on this film. There is homogenous "ground-glass" appearance on the medullary canal.
Fibrous dysplasia usually becomes manifest in late childhood. All bones may be affected, however, there is a slight predilection for the large bones of the extremities. The disease may be associated with pigmentary disorders and precocious puberty in females.

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MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

The American Medical Association challenged charges of widespread tax cheating by physicians and renewed its offer to cooperate with the government in cracking down on dishonest doctors.

In letters to Sen. Russell B. Long (D., La.), chairman of the Senate Finance Committee; Walter C. Bornemeier, M.D., president of the AMA, answered the tax cheating charges; and Ernest B. Howard, M.D., executive vice president of the AMA, renewed the offer of cooperation. But Howard also said that mandatory reporting of unassigned fees by insurance agencies would be an ineffective and unfair way to try to uncover doctors cheating on their income taxes on payments for their services under Medicare and Medicaid.

The tax-cheating charges grew out of testimony given by Meade Whitaker, who then was tax legislative counsel for the Treasury Department, at a hearing of the Senate Finance Committee during its consideration of changes in the Medicare and Medicaid programs. He said that many providers of services under the two health care programs might have "substantial deficiencies" in their income tax returns.

In a letter to Long and Sen. Wallace F. Bennett (R., Utah), a ranking minority member of the Finance Committee, Dr. Bornemeier said that the charges had been widely distorted in the press and these reports do the medical profession a serious injustice.

Whitaker testified that from an original list of 11,000 who received payments of $25,000 or more for services rendered under Medicare and Medicaid in 1968, 4,000 returns warranted a detailed audit by the IRS.

With preliminary audits completed on 3,000 of the 4,000 returns, there were indications that 1,500 of these showed "substantial deficiencies," the Treasury reported. "Substantial deficiencies" later were defined as being underpayments of more than $100.

Dr. Bornemeier said that this testimony was being widely interpreted to mean either that one-third of the medical profession was cheating (4,000 of 11,000 cases to be audited) or that one-half of the profession was cheating (1,500 alleged offenders from 3,000 actual audits).

"Assuming the worse—that 1,500 doctors out of 11,000 are guilty of income tax irregularities—the correct proportion would be between 13 and 14 per cent rather than 33 or 50 per cent," Dr. Bornemeier said.

The AMA president called on the Treasury Department to be specific in their charges since the interpretation by the press growing out of their testimony reflected on the profession as a whole.

"As of now," he continued, "there seem to be 1,500 cases where substantial deficiencies may exist. I think we should know what proportion of these cases represents cause simply for further examination and what proportion represents cases that may realistically be expected to end up with the fraud division of the IRS.

"I think we should know what proportion of the serious cases involve physicians. I suspect the figures given include osteopaths, dentists, pharmacists, and optometrists and others eligible to receive Medicare-Medicaid payments."

Dr. Bornemeier told Long that his request for documentation of these cases was not a defense for the dishonest physician or anyone else who attempts to falsify an income tax return.

"We are on record," the Chicago physician said, "as requesting examples of wrongdoing by doctors receiving payments under government health programs so that we may take action of our own."

Dr. Howard said that "the dishonest or incompetent physician hurts us just as much as he harms his government."

Dr. Howard said that a recent statement by Long that the AMA had been "completely forthright and honorable, and sought to shield no one" is "exactly our position."

The AMA official also noted that Long at a recent hearing of the Finance Committee had referred correctly to previous requests by the AMA that it be given examples of suspected chicanery by physicians in government health programs "so that we might take our own action."

As for mandatory reporting of unassigned medical payments—those given to the patient rather than to the physician—Dr. Howard said such a requirement "would not provide the Internal Revenue Service with helpful and meaningful data." He urged rejection of such an amendment proposed by the Treasury Department. A joint House-Senate Conference Committee rejected it last year in considering tax reform legislation.

The Treasury Department proposed that Blue Cross-Blue Shield organizations, Medicare and Medicaid agencies, and other health insurance carriers be required to report unassigned payments for medical services.

Dr. Howard pointed out that millions of patients have more than one health insurance policy and may collect total benefits exceeding the physician's charge, and that some patients even may not use the insurance payment to compensate the physician. Physicians also would have to set up costly additional bookkeeping record procedures to list separately and in detail each charge to a patient in excess of $25, the AMA official said.

"The proposal of the Treasury Department would place physicians in a unique category under our tax laws," Dr. Howard said. "We know of no other provision in the tax laws which singles out one class of individual taxpayers, requiring payers to report to the IRS individual payments made to taxpayers as well as the annual aggregate amount of such payments.

"We believe . . . that the proposed . . . amendment is unfair and discriminatory and would do little to accomplish any goal for an improved system. Instead, as an additional cost burden, it would place further pressure on the cost of medical care."

* * *

President Nixon, at a bill-signing ceremony, praised the new Drug Abuse Act for providing "a forward looking program" for treatment of drug addiction as well as strengthening the government's law enforcement powers in the field.

The new law provides for the Department of Health, Education and Welfare running extensive programs for the treatment and rehabilitation of drug users and for antidrug education. It authorizes HEW's National Institute of Mental Health to spend $189 million over three years to build and staff treatment facilities, to support rehabilitation programs and to increase antidrug education programs. Another $1 million is authorized for creation of a presidential commission on marijuana.

State comprehensive health plans getting federal aid must now include drug abuse programs, and an Administration spokesman suggested that all states model their drug control laws on the federal statute.

Before final passage, Congress modified the original legislation to meet many of the objections of the medical profession against a proposal that would have allotted most classification powers and research control to the Justice Department. The attorney general can declare drugs as dangerous but he is bound by HEW's medical and scientific evaluations.

The strengthened enforcement provisions are aimed at the drug pusher with lighter penalties for drug possession, particularly by minors. Federal first offense cases for drug users are lowered from felonies to misdemeanors. Under this provision, a person found guilty of possessing marijuana for the first time will not necessarily be subjected to an automatic stiff jail sentence. But to facilitate arrest of pushers, the controversial "no-knock" clause was retained.

Requirements as to records kept by physicians remain as under the old narcotics law except where he regularly dispenses a non-narcotic drug and charges for it.

The new law broadens the former narcotics statute to include, with varying restrictions and controls, amphetamines, barbiturates and other drugs ruled dangerous. At the start, controls will be drastically tightened over marketing the liquid form of amphetamines which can be taken by injection.

Companies producing or distributing a long list of commonly prescribed stimulants, depressants and tranquilizers will be subject for the first time to federal registration requirements. The Narcotic Bureau also now has a new power to set production quotas for such non-narcotic drugs.

C. Joseph Stetler, president of the Pharmaceutical Manufacturers Association, praised Congress and the Administration for enactment of the law.

"Drug abuse has become a frightening problem for millions of Americans. It is absolutely proper for the federal government to exercise this type of aggressive leadership to stem the use of physically and psychologically damaging illicit substances, to control the misuse of legitimate medicines produced for the health and welfare of citizens, and to support rehabilitative needs for victims of the drug problem."

Other health legislation recently enacted into law included:

—The Communicable Disease Control Act of 1970 which authorizes expenditure of $210 over the next three years for vaccination and other control programs against tuberculosis, venereal disease, German measles, measles, polio, diphtheria, tetanus, whooping cough, RH disease, and other diseases judged by the Secretary of Health, Education and Welfare to be major problems.

—The Regional Medical Programs and Comprehensive Planning and Services Act of 1970 extending the programs for three years with authorized spending of $545 million for RMP and $52 for CHP. Further appropriations totalling $961.5 million for project grants for areawide health planning; training, studies and demonstrations; comprehensive public health services, and health services development. RMP is expanded to include kidney disease. The new law provides for a systems analysis of national health care plans and for a cost and coverage report on such legislation. A National Advisory Council on Comprehensive Health Planning Programs is created.

—The Health Training Improvement Act of 1970 which extends the allied health educational program for three years with aid to schools and students. Authorized appropriations total $308.5 million. The maximum yearly loan will be $1,500 and the maximum aggregate loan $6,000 for any student. A forgiveness of up to 50 per cent will be allowed if the student practices in a shortage area or for a nonprofit organization after graduation.

—The Developmental Disabilities Services and Facilities Construction Amendments of 1970 extending the mental retardation facilities construction program for three years and expanding it to include grants for planning, provision of services, and construction and operation of facilities for persons with developmental disabilities. Authorized appropriations total $295 million.

Increased Sickling of Parasitized Erythrocytes as Mechanisms of Resistance Against Malaria in Sickle Cell Trait

L. Luzzatto (Univ College Hosp, Ibadan, Nigeria), E. S. Nwachuku-Jarrett, and S. Reddy

Lancet 1:319-321 (Feb 14) 1970

Blood samples from children with the sickle cell trait (A/S heterozygotes) having acute malaria *(Plasmodium falciparum)* were incubated in vitro under anaerobic conditions, such that the number of cells sickled is a linear function of time. The rate of sickling of parasitized cells was two to eight times greater than that of non-parasitized cells within the same blood sample, indicating that parasitization of an A/S erythrocyte by *P falciparum* substantially increased its probability to sickle. Parasitized cells, once sickled, seem to be removed more effectively from the circulation by phagocytosis; this is the main mechanism whereby A/S heterozygotes are at a selective advantage.

Recognition of Intravascular Clotting

A. J. Seaman (3181 SW Sam Jackson Park Rd, Portland, Ore)

Arch Intern Med 125:1016-1021 (June) 1970

The plasma protamiue paracoagulation (3P) test for demonstrating fibrin monomer in citrated blood plasma was useful in identifying diffuse intravascular coagulation in eight patients when evaluated in the light of clinical and other laboratory findings. The result of the 3P test is also positive in some patients after open-heart surgery. Only two children having repair of congenital heart defects had evidences of a consumptive coagulopathy. Patients with venous thrombosis or possible pulmonary embolism, inconsistently had a positive 3P test result without other evidences of consumptive coagulopathy. The 3P test result without other evidence of consumptive coagulopathy was negative in one case each of primary fibrinolysis and of malignant hypertension.

PERSONAL AND NEWS ITEMS

Comments of Benton Physician Appear in MODERN MEDICINE "Forum"

Dr. Ronald W. McNichol, clinical director of Alcoholic Treatment Services in the State of Arkansas Department of Education, Benton, was one of five United States physicians whose comments on treatment of alcoholic patients appear in the November 16, 1970, issue of *Modern Medicine,* a national medical journal. Dr. McNichol, invited by the editors to contribute to the "Forum" article, is also a faculty member at the University of Arkansas School of Medicine.

Dr. Downs' Article to Appear in Year Book of Urology

"Congential Polyps of the Prostatic Urethra, A Review of the Literature and Report of Two Cases," by Dr. Ralph Downs of Little Rock, and originally published by the *British Journal of Urology,* will be included in the *Year Book of Urology,* published by the Year Book Medical Publishers.

Emergency Care Course Held

The Lonoke County Medical Society and the Arkansas State Department of Health, in cooperation with the National Highway Safety Bureau, conducted a course in "Emergency Care and Transportation of the Sick and Injured" early in December at the Production Credit Association Building in England, Arkansas.

Dr. E. D. McKnight Has Eighty-ninth Birthday

Brinkley's "dean of doctors," Dr. E. D. McKnight, was honored by his daughter, associates, and many friends in early November on his 89th birthday. "Doctor Ed," as he is affectionately known, states that his schedule calls for him to make another eleven birthdays before beginning to grow old.

Medical Commission Chairmen Named

Drs. Lee Parker of Fayetteville and Francis Henderson of Pine Bluff have accepted the co-chairmanship of the recently created Medical and Health Manpower Commission.

"Hixon Hour" Award Goes to Dr. Nettleship

Fayetteville pathologist, Dr. Anderson Nettleship, was recognized for his contributions to the history of medicine by being awarded, in November, the honorarium of the Hixon Hour. Established in 1950, the Hixon Hour was created to enrich the experience of physicians in the Kansas City area by bringing them in contact with the great classics of medicine.

AAGP Elects Three to Membership

Drs. Neil Compton of Bentonville, Clyde Dodson Paulk of Sheridan, and David E. R. Blanton of Ozark were elected in November to active membership in the American Academy of General Practice.

Dr. Curtis B. Clark of Sheridan was re-elected to active membership by the Academy.

Siloam Springs Doctor Attends Coronary Care Course

Dr. John I. Moose of Siloam Springs attended the postgraduate course in coronary care conducted at the University of Arkansas Medical Center in early November.

Burglaries Reported in Hot Springs

Offices of three doctors at the Wright Clinic in Hot Springs were burglarized in late November. Reporting break-ins were Drs. Louis R. McFarland, Jack Wright and Martin Lax.

Pulaski County Medical Assistants Honor Dr. Abraham

Dr. James H. Abraham of Little Rock was named Boss of the Year at the Pulaski County Medical Assistants Society's annual Bosses' Night banquet.

Garland County Medical Assistants Honor Dr. Mashburn

Dr. William Mashburn of Hot Springs was named Boss of the Year at the Garland County Medical Assistants Society's annual Bosses' Night banquet.

Recipients of guest speaker awards were also Dr. Mashburn and Drs. George Queen and Paul Wright, while master of ceremonies awards were presented to Drs. Bluford Stough and M. R. Springer.

Paragould Hospital Names Staff for 1971

Community Methodist Hospital named its 1971 staff officers in a recent announcement as Dr. Bill Page, chief of staff; Dr. A. J. Baker, vice chief of staff; and Dr. C. Wayne Starned, secretary.

Dr. Landrum Makes Address

Dr. Sam Landrum of Fort Smith was the recent guest speaker at a meeting of that city's Civics Club. Dr. Landrum's speech was entitled "Emergencies and Trauma Patients."

Members of the Professional Services Review Organization of the Arkansas Medical Society

The attention of the members of the Arkansas Medical Society is called to the Professional Services Review Organization which formerly was known as the 21-Man Committee. The Organization meets once a month with the bulk of its agenda composed of matters submitted to it for review by Arkansas Blue Cross-Blue Shield. Items considered by the Organization may include questions arising from federal employers insurance programs, CHAMPUS, private insurance companies, and Title 18-Medicare.

Below are listed the members of the Arkansas Medical Society's Professional Services Review Organization as of October, 1970:

Term Expires April 30	Professio al Services Review Organization Members Name and Address	Specialty Represented
1973	C. Lewis Hyatt, 515 N. Main, Monticello 71655	Gen. Pr.
1972	Ross Fowler, 215 W. Stephenson, Harrison 72601	Gen. Pr.
1973	Art B. Martin, 1500 Dodson, Fort Smith 72901	Int. Med.
1972	W. Sexton Lewis, 900 N. University, Little Rock 72207	Int. Med.
1971	Wright Hawkins, 100 S. 14th, Fort Smith 72901	Surgery
1972	Gilbert O. Dean, Donaghey Building, Little Rock 72201	Surgery
1973	Rhys A. Williams, 651 N. Spring, Harrison 72601	Surgery
1971	Purcell Smith, Jr., P. O. Box 7008, Little Rock 72205	Allergy
1973	John L. Weare, 1120 Marshall, Little Rock 72202	Anes.
1971	A. C. Bradford, 100 S. 14th, Fort Smith 72901	Derm.
1971	James L. Smith, 623 Woodlane, Little Rock 72201	Oph.
1971	E. L. Milner, 500 S. University, Little Rock 72205	Oto.
1972	Robert F. McCrary, 505 W. Grand, Hot Springs 71901	OB-GYN
1973	Robert Watson, Donaghey Building, Little Rock 72201	Neurology
1973	Frank M. Westerfield, 1120 Marshall, Little Rock 72202	Psychiatry
1972	Lloyd R. Warford, 6213 Lee Avenue, Little Rock 72205	Pediatrics
1971	W. J. Rhinehart, Donaghey Building, Little Rock 72201	Radiology
1972	Kenneth R. Duzan, 443 W. Oak, El Dorado 71730	Pathology
1972	H. Austin Grimes, P. O. Box 7117, Little Rock 72205	Orthopaedics
1973	Carl Wilson, 1500 Dodson, Fort Smith 72901	Urology
—	Charles F. Wilkins, Jr., 3005 W. Main Place, Russellville 72801	(CHAIRMAN)
—	Jack W. Ken edy, 4815 W. Markham, Little Rock 72201	(PRESIDENT)
—	Stanley Applegate, Springdale Clinic, Springdale 72764	(PRESIDENT-ELECT)
—	Elvin Shuffield, 1000 Wolfe, Little Rock 72202	(SECRETARY)
—	C. C. Long, 110 W. Commercial, Ozark 72949	(CHAIRMAN OF COUNCIL)

SUB-COMMITTEE OF SUB-SPECIALTIES
(Representatives on call to meet with Review Organization as needed when claims in specialty field are considered)

Term Expires April 30	Sub-Committee Representative Name and Address	Sub-Specialty Represented
*	Carl L. Williams, 522 S. 16th, Fort Smith 72901	Thoracic Surgery
*	T. J. Smith, 900 N. University, Little Rock 72207	Gastroenterology
*	Thomas H. Allen, 415 N. University, Little Rock 72205	Plastic Surgery
*	John C. Schultz, 900 N. University, Little Rock 72207	Pulmonary Diseases
*	Kelsy Caplinger, III, 4001 W. Capitol, Little Rock 72205	Pediatric Allergy

*Terms to be designated by Professional Services Review Organization.

Arkansas Auxiliary Representatives Attend Southern Medical Association Auxiliary Meeting

Mrs. Lynn Harris of Hope, president of the Woman's Auxiliary to the Arkansas Medical Society, and Mrs. Henry V. Kirby of Harrison, councilor to the Woman's Auxiliary to the Southern Medical Association, attended the annual meeting of the latter organization held this year in Dallas, Texas, in November.

NEW MEMBERS

WALLACE ALLAN THOMAS, M.D., is a new member of the Chicot County Medical Society.

Born in Patterson, New Jersey, Dr. Thomas was graduated from Arkansas A & M College in Monticello with the B.S. degree in 1964. His M.D. degree was obtained from the University of Arkansas School of Medicine in 1968.

Since the completion of his internship at the University of Arkansas Medical Center, Dr. Thomas has been serving as a Flight Surgeon with the United States Air Force at Shaw Air Force Base in Sumter, South Carolina.

Dr. Thomas will soon enter a residency in Ophthalmology in Birmingham, Alabama.

* * *

Pulaski County Medical Society announces DR. RONALD HENRY BOYLE of Memphis, Tennessee, as a new member.

Dr. Boyle received his B.S. from Henderson State Teachers College in Arkadelphia and his M.D. from the University of Arkansas School of Medicine in 1964.

After an internship at St. Francis Hospital in Wichita, Kansas, and two years in the United States Air Force, Dr. Boyle returned to the University of Arkansas Medical Center to complete a three-year residency in Psychiatry.

Dr. Boyle now holds the position of Instructor in Psychiatry on the faculty of the University of Arkansas Medical Center and engages in private practice at the Arkansas Psychiatric Clinic, 1201 Bishop, Little Rock.

THINGS TO COME

The Arkansas Speech & Hearing Association in conjunction with the Arkansas Regional Medical Program will present a two-day workshop entitled "Rehabilitation of the CVA Patient." This meeting will be held in the North Little Rock Holiday Inn on January 22 and 23, 1971. No registration fee will be charged for this workshop.

PROGRAM TITLE

REHABILITATION OF THE CVA PATIENT

Friday, January 22, 1971

8:00-9:00	Registration—Coffee
9:00-9:15	"Welcome" George Herndon, Ph.D., President, Arkansas Speech & Hearing Association
9:15-9:30	"Regional Medical Program" William Silverblat, M.D., Director
9:45-12:30	"How One Neurologist Looks at the CVA Patient: Language and Language Disorders" Joe R. Brown, M.D., Professor of Neurology, Mayo Clinic
12:30-2:00	LUNCH
2:00-2:45	"Evaluation and Prognosis in Aphasia" Daniel R. Boone, Ph.D., Professor of Speech Pathology, University of Denver
7:00-8:00	Social Hour
8:00	DINNER—For reservations, write: Arkansas Speech & Hearing Association, Box 1970, UAMC, Little Rock, Ark. 72201

Saturday, January 23, 1971

8:00-8:30	Coffee
8:30-11:15	"As the Aphasic Sees It" Miss Josephine Simonson, M.A., Assistant Professor, Speech Pathology, University of Texas Southwestern Medical School
11:30-1:30	Team Approach to the Treatment of Aphasia Dr. Joe R. Brown, Mayo Clinic Dr. Daniel R. Boone, University of Denver Dr. Dennis D. Lucy, Chairman, Department of Neurology, University of Arkansas Medical Center Dr. Gerald W. Barnes, Clinical Psychologist, V.A. Hospital, Little Rock Miss Josephine Simonson, University of Texas, Southwestern Medical School

Council Minutes: of the Arkansas Medical Society

Sunday, November 22, 1970

The Coachman's Inn, Little Rock

The Council of the Arkansas Medical Society met at 11:00 a.m. on Sunday, November 22, 1970, at the Coachman's Inn, Little Rock. Present were: Long, Kennedy, Applegate, Shuffield, Hawkins, Saltzman, Fairley, P. Gray, Bell, D. Gray, Lazenby, Irwin, Wynne, Duzan, Harris, Kemp, Bethel, Orr, Kolb, Kirby, Henry, Fowler, Whitaker, Hyatt, Thomas, Verser, Chudy, Wilkins, Winston Shorey, Purcell Smith, George Mitchell, Edgar Easley, C. W. Silverblatt, Bryant Swindoll, John Herron, Charles Kemp, Tom Jansen, Alfred Kahn, Friedman Sisco, James W. Branch, Harold McCormack, R. A. Burger, Ross Maynard, Duane Jones, Spencer Albright, Mr. Michael Elliott, Mr. Edward Rensch, Mr. Leon Swatzell, Mr. Eugene Warren, Mrs. Payton Kolb, Mrs. Lynn Harris, Mr. Paul Berry, and Mr. Paul Schaefer.

The Council transacted business as follows:

1. Chairman Long introduced numerous guests present.
2. Chairman Long called on the councilors from the second and fourth districts to comment on councilor district meetings which had been recently held in their districts. Dr. Long encouraged the other councilors to hold meetings in their districts to increase interest in Medical Society work and to improve understanding and support of medical organization policy.
3. Upon the motion of Orr and Duzan, a resolution by the Washington County Medical Society to request legislation of the 1971 General Assembly to create a new professional entity—Registered Physician Assistants—was referred to the Legislative Committee for whatever action it deemed appropriate. Attention was called to the fact that the same resolution was on the House of Delegates agenda for the afternoon meeting and a decision of the House would be final.
4. Mr. Schaefer reported on a recent AMA Conference on Quackery which dealt principally with chiropractic. Mr. Schaefer conveyed the hopes of the AMA Department of Quackery that the Arkansas Medical Society would resist encroachment on the practice of medicine by chiropractors.
5. The chairman of Ark-Pac reported that a further membership drive was planned for the remainder of the year and that it was hoped to enlist the Auxiliary more actively in seeking new members.
6. Upon the motion of Wynne and Saltzman, the Council endorsed the formation of a Health Careers Council by the Woman's Auxiliary to the Arkansas Medical Society.
7. Upon the motion of Saltzman and Orr, the Council voted to contribute $500 to the formation of the Health Careers Council.
8. Dr. Saltzman, Dr. Kennedy and Mr. Schaefer reported on a meeting attended by them. The meeting was called by the Extension Division of the University of Arkansas. It was proposed that the Extension Division, Regional Medical Program, Arkansas Medical Society, University of Arkansas Medical Center, State Health Department, and Health Planning Program apply for a planning grant to develop a model or models to educate the public how and what one may accomplish by self help without or prior to calling on the formal health care system. Upon the motion of Paul Gray and Saltzman, the Council voted to approve Arkansas Medical Society participation in this effort. Inasmuch as the Medical Society had been invited by the group to elect a co-chairman, Dr. Ben Saltzman was elected to serve in that position.
9. Dr. Kennedy read to the Council a resolution handed him that morning by the Registered Nurses Association which would put the Medical Society on record as approving the efforts of the Arkansas State Nurses Association to increase the registered nurse population and to elevate the status and salary of the registered nurses. The resolution also called for the Society's promising support to the Nurses Association's efforts to establish state scholarship funds for students of nursing. Upon the motion of Kolb and Bell, the Council voted to refer the resolution to the resolutions committee for the next meeting of the Council.

APPROVED: C. C. Long, M.D.
Chairman of the Council

TUBERCULOSIS ABSTRACTS

Sponsored by Arkansas Tuberculosis and Respiratory Disease Association

PROGRESSIVE DISSEMINATED HISTOPLASMOSIS AS SEEN IN ADULTS

Once local host resistance is overcome, hematogenous dissemination of the histoplasma spores may occur. Amphotericin B provides the most effective means of combating the infection. Most properly managed patients can tolerate this drug even for prolonged periods.

In the present review, case records of 530 adult patients with diagnosed histoplasmosis over a 13-year period (1955-1968) were studied for the dual purpose of ascertaining the extent of progressive disseminated disease and the therapeutic efficacy of amphotericin B.

Twenty-five patients from 16 to 75 years of age were found to have progressive disseminated histoplasmosis. The largest number (8, or 32%) were within the sixth decade of life. Males predominated (12.5:1). One patient was a Negro; 24 were white.

Fifteen (60%) of the group were farmers or lived on farms for many years. One patient developed symptoms within three months after becoming a driver of manure-hauling equipment. One patient owned a pet shop.

The commonest symptoms in the group included fever, cough, dyspnea, fatigue, weakness, anorexia, and weight loss.

The demonstration of *H. capsulatum* was the most important criterion for inclusion in the study. This was achieved by differential staining of the tissue sections with methenamine silver stain as modified by Gomori.

In the encapsulated lesions the organisms were usually found in great numbers in the centers where recent caseation had developed. In the tissue, the intracellular organisms appeared as small or oval yeast-like bodies, measuring from 1 to 5 μ. Extracellular forms as large as 10 to 15 μ were also noted in the necrotic tissues.

Additional confirmation was obtained by isolation and identification of the organism from tissue cultures. Animal inoculation and pathogenicity studies were also performed in a few isolates. Dissemination of the disease was presumed when more than one organ was found to be involved.

Most investigators believe that the natural route of histoplasmosis is through the respiratory tract by inhalation of spores. In at least one of five patients with gastrointestinal involvement in the present study, however, spores appear to have gained entry through the gastrointestinal tract. While widespread involvement of the peritoneum, the mesenteric glands, spleen, and adrenals was found at necropsy, extensive search of the lungs and chest X-ray failed to reveal active or healed lesions.

More characteristically, 19 of the 24 patients tested had positive sputum cultures for *H. capsulatum*. Roentgenograms of the chest varied: two patients had no evidence of pulmonary disease, active or healed; five had diffuse calcified lesions; one showed miliary calcification; 11 had cavitary lesions, and six had pulmonary infiltration without cavitation.

Whichever the portal of entry, once the local host resistance is overcome, hematogenous dissemination may occur.

Five patients, for example, with typical histoplasmosis in the oral cavity were later found to have disseminated disease to other organs. One of these patients, hospitalized for histoplasmosis of the palate and larynx, was found to have disseminated disease of the ileum on operation for acute intestinal obstruction. The constricting lesion was positive for *H. capsulatum* on stain and tissue culture. He improved with amphotericin B and is well three years after treatment.

Oral lesions of histoplasmosis may mimic tuberculosis, syphilis, Hodgkin's disease, and other lymphomas, Vincent's, and other fungal infec-

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Prathapchandra Reddy, M.D.; David F. Goeckick, M.D.; Charles A. Brasher, M.D.; Howard Larsh, Ph.D. *The American Journal of Medicine*, May, 1970 (Vol. 48).

tions. Biopsy for demonstration of the specific organism should be undertaken in all suspicious lesions.

It is not generally appreciated that histoplasmosis, both in its acute and chronic stages, can involve the heart and great vessels. One case of pericardial effusion due to histoplasmosis in one of the study patients was reported earlier (1961). A second patient in this series had possible pericardial involvement as well.

Six patients had positive urine cultures for *H. capsulatum,* and four of these patients had azotemia (with blood urea nitrogen levels > 25 mg per 100 cc) prior to therapy.

However, on necropsy only one patient was found to have renal involvement. This suggests that patients without extrarenal histoplasmosis without renal disease pass *H. capsulatum* in urine.

In the one patient with renal disease, lesions were bilateral and there are several small foci localized mainly to the glomeruli and tubules in the cortex. *H. capsulatum* were also isolated from the liver, spleen, and adrenal glands of this patient.

Another patient had vesical and prostatic involvement. Grossly, the bladder was rough, thick-walled, with multiple ulcerations. Microscopic examination demonstrated *H. capsulatum.* Tissue cultures of the bladder and prostate, also the adrenals and lungs, were positive.

Other areas of involvement included the liver (in two patients), the spleen (in six), the adrenal glands (in eight), the skin (in two).

Lymph nodes are frequently involved in the inflammatory process of this disease. Extrathoracic lymph-node involvement may result from generalized dissemination via the blood or lymph stream. Regional nodes into which an infected organ drains may also become infected.

In the present review, 17 cases of extrathoracic lymph-node involvement was demonstrated, including four cases of involvement of the mesenteric nodes, five of the scalene nodes, two of the cervical nodes, four of the inguinal nodes, and two of the submandibular nodes.

Blood cultures were positive in 13 of 22 and bone marrow cultures in 15 of 23 patients. Since all histoplasmosis in the study was found to be disseminated through the blood stream; negative cultures probably mean that at the time of testing there were no circulating organisms.

TREATMENT

Amphotericin B has been found to be the most effective drug in the treatment of histoplasmosis when adequately employed. Adequate treatment consists of 1 mg dose per kg of body weight per day, or a total dose of 40 to 50 mg per day, injected intravenously three times weekly after a gradual buildup from a low initial dosage of 10 to 20 mg per day.

Of the 14 patients with disseminated histoplasmosis who had received adequate treatment over the past 11 years, only one (7%) has died from histoplasmosis. In contrast, all three patients (100%) who did not receive amphotericin B died from it.

With proper management most patients can tolerate the drug, even for prolonged periods. Minimum adequate coverage for active histoplasmosis was found to be a total dose of 25 mg per kg. Higher total dosages (40 to 50 mg per kg) are recommended for more serious forms of the disease.

Severe Myositis During Recovery From Influenza

P. J. Middleton, R. M. Alexander, and M. T. Szymanski (Hosp for Sick Children, Toronto)

Lancet 2:533-535 (Sept 12) 1970

Twenty-six children with acute bilateral lower limb myositis of one to five days' duration were investigated and found to have an associated influenza virus infection. Upper respiratory tract signs and symptoms had begun to wane before the onset of severe leg pain associated with walking. Affected leg muscles were tender on palpation and serum creatine phosphokinase levels were elevated during the acute phase of illness. Twenty-two of these patients with myositis were seen in March-April 1969 (influenza B virus), three in January 1970 (A2 Hong Kong virus strain), and one in April 1970 (influenza B virus).

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THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 67 No. 9

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THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

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Perinatal and Maternity Mortality 1949-1959

A Local Study

Eugene T. Ellison, Sr., M.D.,* and Eugene T. Ellison, Jr., B.A.**

The perinatal and maternal deaths 1949-1959 in a local hospital were studied several years ago.[1] Some comparisons were made with similar studies at other hospitals and some state and national statistics were reviewed. Attention was directed to the need for more accurate diagnosis of the causes of these deaths. It was our opinion that more pathological analyses and more information on intrauterine life was needed for improvement of our perinatal and maternal death rate. The high breech delivery mortality further suggested that the mechanics and discipline of the birth rooms be subject to frequent reviews.[2-8] A similar analysis was recently carried out for the succeeding ten year period 1959-1969 and comparisons were made with the preceding ten years.

Approximately 10,600 cases were studied from each of the ten year periods. Chart 1 shows local hospital deliveries during these years. There is a small drop in the number of local deliveries despite a gradual growth in our cities' population. This corresponds to the national trend plus some demographic shifts in our area.

Perinatal mortality (Period I) includes fetal deaths and infant deaths from 1000 gms. through the seventh day of life, but most analyses of obstetrical wastage and difficulties consider those born weighing over 500 grams, as well. The causation is similar, but survival statistics are more realistic where the birth exceeds 2.2 lbs. or 1000 gms. which represents, at least, twenty-four to twenty-six weeks gestation.

Our material was obtained from both the mothers' and infants' charts, plus comparison with monthly statistical records in order to assure that all were included. Many details including maternal age and character of prenatal care, although recorded, is not possible to show in our all too bulky charts. At least 95% were private patients or attended maternity clinics staffed by our professional group on a rotation basis. This represents a considerable improvement in the prenatal care afforded patients in our area over the period 1949-1959.

Chart 2 shows a classification of the disorder which the obstetricians and pediatricians considered the basic cause of demise. The obstetrical factors leading to early delivery are emphasized if decisions between multiple factors were considered. The degree of prematurity is shown and the births over 2500 gms. are included as mature births.

Chart 3 compares the two ten year intervals with a few rather significant changes recorded. The number of congenital abnormalities resulting in wastage remained the same during the two periods. The underlying factors of causation here are becoming the subject of much professional interest involving genetics and the intrauterine exposure to tetragens and disease. Later analyses may well show less wastage for this category.

The second large group classified as physiological inadequacy or 500-1000 grams birth weight has decreased only because attempts to classify causation have shifted them to other groups, particularly those associated with uterine bleeding. It is interesting that most of these infants were born alive. The overall autopsy rate was extremely low in this group. While excessive uterine hemorrhage preceded these immature births, it seems to us that clinical and extensive

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** Student, University of Arkansas Medical School.

laboratory studies might be helpful in preventing these immature births.

Disorders of labor are, in essence, preventable. Of particular interest to us was the continued number of breech births near term which died. This was observed in the first series. Twin births led to the death of, at least, one of the infants in fourteen cases.

Anoxia as a classification involving intrauterine distress has decreased, probably related to better charting and increased interest in basic causation factors. Premature separation of the placenta dominates this group. An attempt to link maternal anemia to placental separation in both groups did not seem justified.

Respiratory deficiency similar to anoxia, but affecting the newborn, appears less frequently. This may well be due to our attempt to emphasize the intrauterine disorders. Better overall pediatric care involving newer birth area techniques and more specialization is also to be considered favorably.

Conditions primarily in the mother, but extrauterine in origin, are listed with more accurate causation during the latter ten years.

We were grateful to find that deaths with no discernible causes decreased most of all groups. This, of course, is related to better concern in establishing underlying factors.

Infections acquired by fetus or newborn are low, reflecting attempts at better hospital care.

A small, but significant, classification included premature membrane rupture, incompetent cervix, and missed abortions. Our study suggested an increase in the number of missed abortions in the last five years but, of course, these primarily were under the 500 gram weight at birth.

Autopsy percentage is still quite low and complete autopsy analyses were not always readily available. However, the autopsy appeared to be carried out in many of the debatable cases. Pregnancy and delivery, being a highly mechanized science, does not always find autopsies as the answer to the problems. More often adequate laboratory and teleoroentgenographic methods help to establish causations.

Exact dating of length of pregnancy from last menstrual periods and fetal size leaves much to be desired. The widespread use of contraceptive progestins appears to be partially responsible, as the date of the last menstruation prior to conception is often most inaccurate. Apparently several months of amenorrhea may follow the use of the birth control pills.

Chart 4 compares the two ten year periods with some national figures. The national figures include all births both in and out of hospitals and are, thus, justifiably higher. A small, but significant, drop in the death rate is recorded. Our statistics also resemble a like study done in the Dallas area in recent months.[3]

Maternal Death Study

Our maternal deaths are an embarrassing reality for each of the ten year periods, but have certain factors which make them interesting.[4] There were nine deaths for 1949-1959, only one of which was hospitalized over twenty-four hours. This death was, in essence, non-obstetrical and was probably caused by a ruptured diverticulum of the large bowel. Six of these had no prenatal care and were admitted after labor at home or transferred from another hospital. There was one non-infectious postpartum embolus of the internal iliac artery and one who died at age 38 after regular prenatal care from sequelae of eclampsia.

During the next ten years of study of the eight deaths, four resulted from infected abortions, one from septic shock related to prolonged ruptured membranes at seven months gestation, one from congenital heart disease and two as sequelae of eclampsia. A ninth death occurred unadmitted in the emergency room from a ruptured aorta, the exact etiology not determined.

It is, therefore, apparent that adequate prenatal care would have markedly decreased these deaths, but adequate marriage counselling or some change in abortion laws may become necessary if septic abortion is to decrease.[10]

Summary — Conclusion

A survey of fetal and infant deaths from 21,000 deliveries over a twenty year period in Texarkana was attempted.

(1) Our findings suggest a declining birth rate, as has been noted nationally.

(2) The prenatal mortality from 1000 gms. (2.2 lbs.) (24 weeks) through the seventh day of life has declined an appreciable amount and

compares favorably with other hospital studies.

(3) There was a decided drop in the number of fatalities where no etiological factors were described.

(4) Attention was again directed to the preventable deaths among breech deliveries at or around term.

(5) Although our interest was primarily directed at obstetrical causation, it appears that care in the nursery was most adequate. This was suggested by the smaller number of fatalities listed under respiratory deficiency and acquired disorders.

(6) There still existed a high fatality for premature births, most of which were born alive, but were inadequate physiologically for survival.

(7) A much higher percentage of mothers had been subjected to prenatal care and the number of indigent deliveries has decreased in the past few years.

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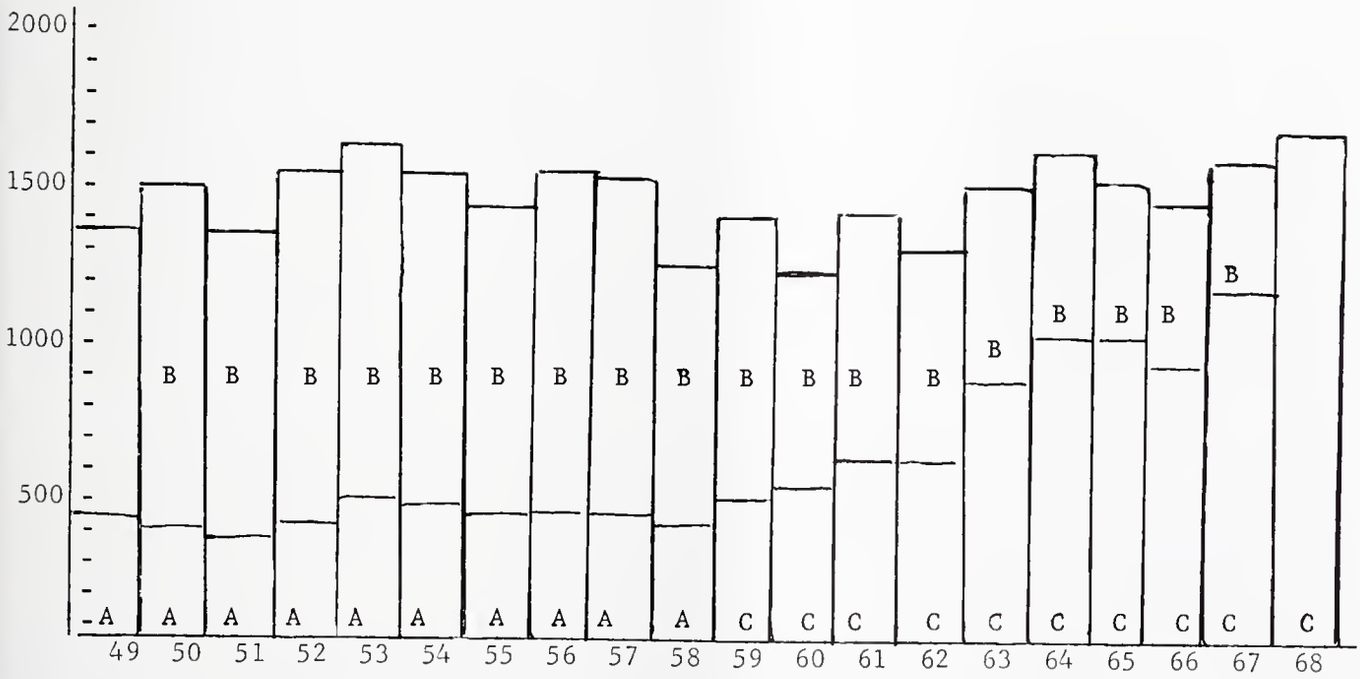
CHART 1



Hospitalized Deliveries: Texarkana Hospital—A. St. Michael's Hospital—B. Wadley Hospital—C.

CHART 2

Classification of Disorders Associated With Infant and Fetal Deaths
1959-1969

	Premature Births		Premature Deaths		Mature Deaths	
	500-1000	1000-2500	Stillborn	Newborn	Stillborn	Newborn
CONGENITAL ABNORMALITY	6	19	5	20	7	25
PHYSIOLOGICAL INADEQUACY DUE TO PREMATURITY MOST UNDER 1000 GNS.	69	4	11	62	1	
HEMOLYTIC DISORDERS	1	1	1	1	7	3
DISORDERS OF LABOR	2	7		9	8	5
ANOXIA						
Premature Separation Placenta	16	28	15	29	7	2
Placenta Praevia	3	8	5	6	1	1
Postmaturity						1
Infarcted Placenta	2	2	1	3	1	
Strangulated Cord	1	2	2	1	4	3
Maternal Circulatory Collapse						
RESPIRATORY DEFICIENCY						
Maternal Narcosis						
Hyaline Membrane D.		4		4		3
Obstruction—Aspiration						2
Ill-Defined Respiratory D. (Atelectasis)	3	12		15		2
CONDITIONS PRIMARILY IN MOTHER						
Toxemia	3	10	7	6	1	1
Diabetes		1	1		5	
Uterine Tumors	1	1		2		
Trauma—Uterine Rupture, Etc.		1	1			
Syphilis		1	1			
Carcinoma of Cervix		1		1		
Appendicitis in Pregnancy		1		1		
Hepatitis		1		1		
Pyelonephritis		2		2		
Anemia—Sickle Cell, Etc.		1		1		
Incompetent Cervix	5	1	3	3		
Cardiac Failure, Etc.						
Premature Rupture Membranes	5	8	2	11		1
CONDITION ACQUIRED BY FETUS OR NEWBORN						
Secondary Infection	1	6	1	6	1	3
Intrauterine Infection	1	2	1	2		
DEATHS WITH NO OBVIOUS CAUSE	2	3	2	3	5	6
MISSED ABORTIONS	1		1			

CHART 3

Comparison of Perinatal Mortality
1949-1959 — 1959-1969
500 Gm. Through 7th Day of Life

	1949-1959	1959-1969
CONGENITAL ABNORMALITIES	48	47
PHYSIOLOGICAL INADEQUACY DUE TO PREMATURITY (TOTAL)	63	63
HEMOLYTIC DISORDERS	12	10
DISORDERS OF LABOR	20	22
ANOXIA		
Premature Separation Placenta	62	53
Placenta Praevia	14	13
Placental Infarct, Etc.	10	5
Strangulated Cord	20	10
Maternal Circulatory Collapse	3	
RESPIRATORY INSUFFICIENCY		
Maternal Narcosis	2	
Hyaline Membrane Disease	5	7
Obstruction—Aspiration	3	2
Ill-Defined Respiratory Disease (Atelectasis)	16	17
CONDITIONS PRIMARILY IN MOTHER		
Toxemia	16	15
Diabetes	6	6
Uterine Tumors	2	2
Trauma—Uterine Rupture, Etc.	2	1
Syphilis		1
Carcinoma of Cervix		1
Appendicitis in Pregnancy	1	1
Hepatitis		1
Pyelonephritis	2	2
Anemia—Sickle Cell, Etc.		1
Incompetent Cervix		3
Cardiac Failure		
Premature Rupture of Membranes	3	14
CONDITIONS ACQUIRED BY FETUS OR NEWBORN		
Secondary Infection	2	11
Intrauterine Infection		2
DEATHS WITH NO OBVIOUS CAUSE	53	14
MISSED ABORTIONS		1

CHART 4

Comparison of Perinatal Mortality Statistics
1949-1959 With 1959-1969

	1949-1959	1959-1969
Total Births Analyzed	10,777	10,670
Immature Deaths 500—1000 gm.	103	122
Premature Deaths 1000—2500	172	127
Mature Infant Death Stillborn—Newborn	90	106
Deaths With No Discernible Cause	53	14
Deaths 1000 gm. Through 7th Day of Life	262	233
Perinatal Mortality 1000 gm. Through 7th Day of Life	24.2	21.7
United States Perinatal	30.8	28.2 (1965)

CHART 5

Maternal Deaths

	1949-1959	1959-1969
Septic Abortion	0	4
Disorders of Labor	1	0
Hemorrhage	2	0
Afibrinogenemia	1	0
Sepsis Near Term	1	1
Toxemia	2	2
Embolic	1	0
Vascular Accidents		1
Cardiac Disease	1	1

Graves' Disease, Present Concepts, Diagnosis, and Treatment

Delbert A. Fisher, M.D.*

Hyperthyroidism and thyrotoxicosis are the terms commonly applied to the symptom complex associated with excessive secretion (or ingestion) of the thyroid hormones thyroxine (T_4) and triiodothyronine (T_3). The disorder, on occasion, may be associated with a chronic multinodular goiter (toxic nodular goiter) or a single autonomously hyperfunctioning thyroid nodule (Plummer's disease). Most frequently, however, hyperthyroidism is associated with a multisystem disease of unknown cause usually referred to as Graves' disease. Parry's disease and Basedow's disease are other eponyms applied to this disorder in the past.

Present Concepts

Graves' disease can be defined as the presence of one or more of the following features:

1. Hyperthyroidism due to diffuse thyroidal hyperplasia.
2. Infiltrative ophthalmopathy.
3. Infiltrative dermopathy (localized pretibial myxedema).
4. The presence of long-acting thyroid stimulator in serum.

The characteristics of the disorder are summarized in Table I. The disease has a familial tendency[1,2]: the incidence of the disease is higher in close relatives of patients with Graves' disease, and there is a definite, although lesser, increase in nontoxic goiter in family members. The total family risk figure for thyroid disease has been quoted as high as 60 per cent when only index cases and their relatives are considered.[3] In addition, the disorder is more frequently concordant than discordant in identical twins.[2] Recently a high family incidence of antithyroid antibodies has been noted in apparently healthy family members of index cases, and the tendency to antibodies seems to be transmitted as a dominant trait.[4] Thus, the disease seems to involve a constitutional predisposition which is associated with the tendency to develop organ specific antithyroid antibodies.

Not infrequently, Graves' disease is observed to be preceded by acute infections, particularly of the upper respiratory tract, and the occurrence following a severe emotional shock has been noted by clinicians since Parry's first description of the syndrome.[5] The onset also can be related, at times, to physical trauma, worry, serious emotional disturbance or other non-specific emotional or physical stress.[5-7] However, the role of stress in the pathogenesis of Graves' disease, although well-documented, remains largely anecdotal and puzzling.

Although Graves' disease is comprised of thyroidal, skin and ocular manifestations, these do not always occur together in the same patient. The thyroid abnormality is the most frequent manifestation occurring in ninety to ninety-five per cent of patients with the disease. Ocular manifestations, varying from mild proptosis to severe opthalmopathy, occur in 40-60% and localized myxedema in only 5-10%.[8] Moreover, the course of these manifestations in a single patient may be quite variable; eye signs often persist after the hyperthyroidism wanes, or may occur without thyroid or skin changes.[8,9] Localized pretibial myxedema usually develops during the active stage of associated thyrotoxicosis but has been reported to appear following thyroidectomy and, rarely, occurs as the sole active feature of the disease.[8]

Graves' disease usually runs a self-limited course. Although treatment of thyrotoxicosis usually is necessary, early literature suggests that about 40% of patients demonstrate remission with rest and supportive therapy alone.[10] The same tendency is observed during treatment with antithyroid drugs.[11]

The serum of patients with Graves' disease usually contains antibodies against thyroid tissue.[4,12,13] These include antibodies against thyroglobulin and thyroid follicular cellular materials such as are observed in other thyroid disorders (particularly Hashimoto's thyroiditis) and a unique thyroid stimulating antibody referred to as the long-acting thyroid stimulator or LATS.[13,14] There is evidence suggesting that

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LATS is specifically directed against thyroid cellular constituents,[15-17] although data of Volpe, et al.,[18] indicating that complete radioablation of the thyroid does not result in disappearance of LATS from serum, would not support this conclusion. It is possible, however, to interpret Volpe's data as indicating that the thyroid antigen or antigens to which LATS is directed also are shared by other organs. Finally, the serum of patients with Graves' disease may contain autoantibodies against gastric and adrenal tissue, and the disease has been observed to occur with unexpected frequency in association with rheumatoid arthritis and rheumatic fever,[6] Addison's disease[19] and Hashimoto's thyroiditis.[20-21] All of these bits of evidence have suggested that Graves' disease is an autoimmune disorder.

It has been suggested that LATS is the cause of the hyperthyroidism of Graves' disease.[8,22] There appears to be an association between the spontaneous remission of thyrotoxicosis and the spontaneous disappearance of LATS, but it has not been possible to firmly establish a correlation between these phenomena. Moreover, Arnaud, et al.[23] have reported that the infusion of plasma from patients with Graves' disease increased thyroid hormone secretion in normal subjects. Perhaps the most convincing evidence that LATS is capable of causing hyperthyroidism is the entity of neonatal thyrotoxicosis. This disorder is rare and afflicts only the newborn of mothers with a history of active or inactive Graves' disease. LATS has been demonstrated in high titer in 14 of 15 of the mothers and 13 of 15 infants with the disease whose sera have been examined for this antibody.[24-28] Since LATS usually is detected in only 50% of adults with Graves' disease,[8] the 93% incidence of high titers in mothers of involved infants and the fact that the duration of signs and symptoms in the infant seems dependent on the level and duration of the LATS globulin activity in newborn blood support an etiologic role for LATS in the syndrome.[25,28]

Recent evidence, however, indicates that there is no correlation between various indices of thyroid function (^{131}I uptake, cholesterol, PBI, PBI^{131}) and the serum LATS concentration in patients with Graves' disease.[29] Moreover, it now appears that there is no correlation between the phenomenon of thyroidal non-suppressibility and the presence of LATS. There is discordance between these two hallmarks of the disorder in both directions; suppressibility occurs in the presence of LATS and non-suppressibility in its absence (Table 2).[15,30] Neither does non-suppressibility correlate with serum TSH.[15,30] Thus, if these data are confirmed, it must be concluded that neither LATS or TSH is responsible for the thyroid hyperfunction or autonomy of Graves' disease and that a more fundamental abnormality must exist, perhaps intrinsic to the thyroid gland itself.

A number of abnormalities in iodine metabolism and in thyroid hormone secretion and metabolism have been described in the thyrotoxic Graves' disease patient.[15] These are summarized in Tables 3 and 4. Thyroidal radioiodine uptake and absolute iodine uptake (AIU) usually are increased two to tenfold. Daily thyroidal iodine turnover or secretion will approximate AIU and may reach values as high as 1200 μg/day.[31] This is not all hormone but includes a large proportion of non-thyronine iodine liberated from thyroglobulin in the process of its hydrolysis. 70-80% of the iodine stored in thyroglobulin is iodotyrosine rather than the iodothyronines (thyroxine and triiodothyronine) since usually only about a third of the iodotyrosines are coupled to form hormone. This stored iodotyrosine is released with thyroxine (T_4) and triiodothyronine (T_3) in the process of thyroglobulin hydrolysis and deiodinated by thyroidal iodotyrosine deiodinase to form a pool of inorganic iodide referred to as "second pool" iodide to distinguish it from newly trapped "first pool" iodide. Usually most of the "second pool" iodide is reutilized by the thyroid cell and may contribute as much as two-thirds of the iodide normally available for new hormone synthesis. In hyperthyroidism the high rate of thyroglobulin breakdown (and iodotyrosine liberation) exceeds the rate of iodide reutilization (via organification) and some of the inorganic iodide diffuses into the circulation.[32] This iodide "leak" contributes to the state of "relative" iodine deficiency characterizing the hyperfunctioning thyroid gland; the colloid pool in these glands may contain only 2 or 3 mg organic iodine.[32,33]

With high rates of thyroid hormone production and relative or absolute iodine deficiency the ratio of T_3 to T_4 synthesis is increased. This ratio is believed to depend upon the relative availability of iodide within the follicular cell; decreased available iodide favors T_3 synthesis and increased availability favors T_4 synthesis. Thus the rate of T_3 secretion may be increased more than the T_4 secretion rate in Graves' disease.

Finally the secretion of an abnormal iodoprotein resembling iodoalbumin has been described in thyrotoxic patients.[34] This phenomenon has been observed in other circumstances of thyroidal hyperplasia and may represent increased formation of a product which is present normally in very small amounts, or it may be due to a limited capacity to manufacture a normal product.

Normally iodothyronines, after secretion from the thyroid gland, are bound to transport proteins, the most important of which are thyroxine binding inter-alpha globulin (TBG) and thyroxine binding pre-albumin (TBPA). The proportion of T_4 that normally remains "free" or unbound is about 0.04%; the proportion of free T_3 is ten times greater (0.40%). In hyperthyroid patients the concentrations of binding proteins is reduced[35] probably due to effects of T_4 on hepatic metabolism of these proteins. However, the serum T_4 concentration usually is high in spite of the decrease in binding protein concentrations with the result that the proportions of free T_4 and T_3 may be very greatly increased.[36,37] The rates of T_4 and T_3 utilization also are greatly augmented; thyroxine utilization may reach values as high as 1 mg daily. Moreover, the proportion of T_4 degraded by the liver may be increased out of proportion to the increase in total T_4 utilization.[36]

Thus, the thyrotoxic patient with Graves' disease has a generally hyperfunctioning thyroid gland with increased rates of iodine uptake, hormone synthesis, hormone release and iodide and/or iodotyrosine secretion. The increased rates of thyroid hormone synthesis and utilization produce a catabolic state associated with increased cellular respiration and a variety of untoward effects related, most importantly, to the hepatic cardiovascular, gastrointestinal, neural and musculoskeletal systems.[15] Table 5 lists the most frequent clinical manifestations of thyrotoxicosis, and it is apparent that many of these relate to excessive catecholamine stimulation. Moreover, it is well documented that adrenergic blockade will ameliorate many of the clinical manifestations of thyrotoxicosis.[28,39] Thus, catecholamines probably account for many of the cardiovascular and metabolic signs and symptoms characteristic of the hyperthyroid state. It has been postulated in the past that thyroid hormones act to potentiate the effects of catecholamines,[40,41] but recent data suggests that this is not the case.[15] How catecholamine actions are augmented in the hyperthyroid subject is not clear. Perhaps the thyroid state of a cell conditions its response to regulatory stimuli.[15]

Diagnosis

The diagnosis of Graves' disease is based on the presence of one or more of the cardinal features, diffuse toxic goiter, opthalmopathy or dermopathy. Less common manifestations include hepatosplenomegaly, lymphoid hyperplasia, myopathy or myasthenia gravis and an unusual clubbing of the fingers and toes associated with periosteal new bone formation along the phalanges and other digital long bones. This latter manifestation has been referred to as thyroid acropthy.[42]

Opthalmopathy may include proptosis, with associated lid lag and stare, chemosis, conjunctional injection with edema and/or opthalmoplegia. Characteristically, limitation of elevation of the eyes appears first, followed by decreased lateral mobility. In extreme cases all movement may be restricted. Werner[43] recently has proposed a uniform classification of Graves' opthalmopathy which is shown in Table 6.

When two or more of the major features of Graves' disease are present, the diagnosis usually is readily apparent. When opthalmopathy or dermopathy occur alone, the diagnosis is more difficult and the presence of subtle hyperthyroidism or thyroidal autonomy is an important clue. The diagnosis of hyperthyroidism usually is based on clinical manifestations (Table 2), increased thyroidal radioiodine uptake and an elevated level of serum thyroxine in the absence of an increased TBG effect. An increased serum PBI, column T_4 or total T_4 (Murphy-Pattee thyroxine) with an increased T_3 resin (or erythrocyte) uptake or an increased serum free thyroxine concentration usually are present. In rare instances thyroidal autonomy can exist in the absence of hyperthyroidism and can be detected by a T_3 suppression test. In this test 75 to 100 μg of T_3 (cytomel) are administered daily for seven days and a measurement of thyroidal radioiodine uptake (20 minute, 2 hour, 6 hour or 24 hour) conducted before and after T_3 administration. In normal subjects thyroid radioiodine uptake is suppressed in excess of 50%. Therefore, a 50% decrease in uptake after T_3 excludes thyroidal autonomy and a diagnosis of Graves' disease. Non-suppression, particularly with a diffuse, hyperfunctioning gland by scan, suggests the diagnosis. High serum levels of LATS are

pathognomonic but occur in only 50% or less of patients (Table 7).

Therapy

Therapeutically, Graves' disease can and often must be approached in several ways. Acute symptomatic treatment can be directed to the catecholamine effects. Agents that deplete tissue catecholamines, such as reserpine[44] and sympatholytic agents, such as alpha-methyl-dopa[45] and guanethidine[46,47] have been employed with some success in the past. More recently, adrenergic receptor blockade has been employed using alpha and/or beta blockers.[39,48,49,50] This approach offers considerable promise, particularly in the acute treatment of severe toxicity or in thyroid storm. Beta receptor blockade is preferred since this approach also blocks, at least in part, the metabolic effects of the catecholamines.

Definitive therapy of the thyrotoxicosis of Graves' disease is directed toward controlling the excessive production and secretion of thyroid hormones. This can be accomplished by means of drugs, radioiodine or surgery. Historically, drug therapy has included perchlorate, thiocyanate or iodide to block iodide trapping, and thionamide drugs (propylthiouracil, methimazole or carbimazole) to block hormone synthesis. Iodide is the only drug which will suppress thyroid hormone release and appears to do so by inhibiting thyroglobulin breakdown. However, the mechanism of this effect is not clear,[51,52] and since perchlorate and thiocyanate are associated with a high incidence of side effects and since the effect of iodide usually is transient, propylthiouracil (PTU) or methimazole (Tapazole) have become the drugs of choice in the United States (Carbimazole is used in Europe). Iodide may be of temporary supplemental value in severely toxic patients and in preparing thyrotoxic patients for thyroid surgery.

Thionamide drugs are rapidly absorbed from the gastrointestinal tract and their peak action occurs within two to three hours. Usually, therefore, the drugs are administered every six to eight hours, although some patients have been successfully treated with a single daily dose.[53] Usually 450 to 600 mg of PTU or 30 to 60 mg of methimazole daily are effective, and improvement will be manifest within six to eight weeks. But, occasionally, dosage as high as 1200 mg daily of PTU may be required. Maintenance doses average one-third to one-half the initial dose. The development of clinical or laboratory evidence of hypothyroidism indicates the need for reducing the drug dosage or adding thyroid hormone in therapeutic doses (200 to 300 micrograms Na-l-thyroxine daily) to the regimen.

Toxic reactions to PTU and methimazole occur in 3 to 5% of patients.[15] Skin rashes are most common but other allergic manifestations can occur. Agranulocytosis has been observed in 0.1 to 0.4 per cent of patients. The skin rash may disappear spontaneously even with continuing treatment, but can be avoided by substituting another drug. A monthly white blood count during the early months of therapy usually is obtained, although the value of frequent white blood counts is questionable since neutropenia may occur quite suddenly.[15] Therefore, it is important that the patient be informed of the significance of fever or sore throat while on thionamide drugs. Neutropenia is reversible in nearly all instances upon discontinuing the drug.

Therapy is usually continued for 12 to 18 months and then discontinued. Reduction in the size of the goiter at termination of treatment and short duration of initial symptoms are favorable prognostic signs.[54] Exacerbation of the disease will occur in perhaps 30 to 50 per cent of patients, usually within one year. Cassidy in 1965,[55] reported that the prognosis after a year of treatment was better in patients in whom the administration of thyroid hormone caused a suppression of thyroidal radioiodine uptake. Alexander, et al.[56] modified the drug therapy regimen by treating patients with a combination of thionamide (carbimazole) and daily triiodothyronine for six months and measuring 20 minute thyroidal radioiodine uptake at frequently intervals. The early uptake is minimally affected by the thionamides and provides an index of suppression of radioiodine uptake without discontinuing the antithyroid drug. These workers concluded that those patients whose 20 minute uptake does not suppress have a high likelihood of exacerbation, whereas those who do suppress are more likely to remain in remission after therapy is discontinued. This approach is presently being investigated in many centers and seems to offer a means of early screening of those patients who are likely to respond well to medical therapy.

Radioiodine is now the most widely employed therapy for thyrotoxicosis in the United States. The effect of this medication is twofold: a) the acute damage to the thyroid cell impairing hormone synthesis and release, and b) longer term

damage to the cell replication mechanism so that gradual thyroid gland atrophy occurs.[57] Advantages of this form of treatment include minimal morbidity, ease of administration and the avoidance of surgical complications. The major disadvantage is the high incidence of permanent hypothyroidism. With conventional radiation dosage (7000 rads) the incidence of late hypothyroidism has been observed to be 5 to 10% during the first year and 2 to 3% per year thereafter.[58,59] There is a recent trend, however, to the use of lower doses of radiation (3500 to 5000 rads) in conjunction with an antithyroid drug during the early months of therapy. This regimen reduces the incidence of hypothyroidism to about 7% after five years while successfully controlling the initial thyrotoxic state.[15]

Surgery remains an effective method of treatment of thyrotoxicosis and the final recourse for treatment failures by other methods. The disadvantages of surgery as primary treatment include: a) the inconvenience, and b) the complications. Mortality varies from zero to 3.1% (although usually less than 1%), vocal cord paralysis from zero to 3.6%, permanent clinical hypoparathyroidism from 0.1 to 3.6%, recurrence from 4 to 18% and late, permanent hypothyroidism from 4 to 30%.[15] Recent studies have suggested that the incidence of subclinical hypoparathyroidism may be as high as 24%.[60]

Thus, it is clear that there is no entirely satisfactory treatment for thyrotoxicosis; each form of therapy has advantages and disadvantages which must be considered for the individual patient. Antithyroid medication may fail to produce lasting remission in a high percentage of patients treated for short periods, but the risk of serious complications is small. The use of radioiodine in children or adolescents has been associated with several cases of thyroid neoplasm,[61-63] and most pediatricians are opposed to this form of therapy during the first two decades of life. In adults, by contrast, there is no significant risk of thyroid carcinogenesis or leukemia with radioiodine treatment,[64,65] and when radioiodine is used in conjunction with antithyroid drugs, thyrotoxicosis can be rapidly and effectively controlled. This is presently the most popular therapy for the majority of adults with thyrotoxicosis notwithstanding the relatively high incidence of late hypothyroidism.

It is the practice in our own clinic to treat most patients, especially younger ones, with antithyroid drugs as the initial therapy. This medication is continued for six to twelve months, and periodic 20 minute radioiodine uptake tests are performed after seven days of triiodothyronine (T_3) suppression (75 μg bid). Alternatively T_3 can be administered chronically as suggested by Alexander, et al.[54] In severely toxic patients T_3 should be withheld until the acute toxicity has ameliorated. Those patients whose thyroidal radioiodine uptake is suppressed with T_3 are taken off medication. Patients failing to suppress after one year are treated with low dose radioiodine or surgery. Unreliable patients can be treated initially by surgery; children and adolescents who cannot be managed with antithyroid drugs also are treated surgically. Finally, the unusual patient with a severe cosmetic problem or tracheal obstruction probably is best treated surgically.

Radioiodine is contraindicated during pregnancy and such patients probably are best managed with antithyroid drugs. The pregnant thyrotoxic patient, however, should be treated with the lowest possible dose of drugs since the thionamides cross the placenta readily and may impair fetal thyroid hormone production. Some have suggested adding thyroxine to the regimen to further protect the fetus, but thyroxine does not readily cross the placental barrier.[66] Triiodothyronine may cross the placenta more readily at term and may be the preferable supplemental hormone.[67] It should be remembered, however, that mild maternal hyperthyroidism carries little risk for the fetus so that a tendency to undertreatment is desirable. If the maternal disease cannot be controlled with small to moderate doses of drug (<300 mg PTU daily), surgery during the second trimester is probably the alternate therapy of choice.

Treatment of opthalmopathy is not satisfactory. In most cases this manifestation of the disease is mild and no treatment is required. In only about 1% of patients are the eye signs severe and progressive. Dark glasses are advisable if photophobia is present and 1% methylcellulose lubricating drops may be helpful if the eyelids fail to close completely.[68] The use of gauze eye patches or the use of plastic tape to close the eyelids during sleep also may be helpful. A number of other measures have been proposed for severe opthalmopathy including thyroid hormone preparations, pituitary ablation, orbital irradiation, hyaluronidase, estrogens or androgens, and iodide.[68] However, none of these measures has

convincingly altered the course of the disease.

Prednisone therapy may be effective in some cases but must be used in large doses. Therefore, such therapy should be started only if proptosis is clearly progressing rapidly and corneal damage is likely, or if rapid progression to severe opthalmoplegia occurs. If the process has been present 18-24 months, a favorable response is less likely.[68] The usual dose is 60 mg daily in four divided doses. Simultaneous administration of an antacid, INH if the PPD skin test is positive, and sedation (if necessary) should be considered.[68] Improvement, if it is to occur, will be evident within two weeks, and the drug should be discontinued if definite improvement is not obvious within this time. If there is no improvement within two weeks, the dose is rapidly decreased by 10 mg every other day; if improvement is observed, the dose can be slowly decreased (10% every two weeks) while watching for recurrence. If recurrence is evident, the dose should be reinstated at the previously effective level. Effective treatment courses usually range between six and twelve months duration. Surgical orbital decompression is the final recourse for control of progressive severe proptosis.[68]

Therapy of dermopathy is rarely necessary. When severe, however, glucocorticoid may be helpful and is best provided as an injunction of 0.2% fluocinolone acetonide cream (Synalar) into the lesion followed by an occulsive Saran-wrap dressing.[69] Improvement is usually observed within two to four weeks.

Summary

Graves' disease is a disorder comprised of thyroid, eye and skin manifestations which may occur together or separately and seem to run an independent course. The disease has a familial tendency, is associated with a high familial incidence of antithyroid antibody and occurs with unusual frequency in association with Hashimoto's thyroiditis and other presumably autoimmune disorders. Moreover, there is a high incidence of circulating antithyroid antibodies in Graves' disease patients including a unique thyroid stimulating antibody commonly referred to as the long-acting thyroid stimulator or LATS. Thus, the disorder is believed to be autoimmune in nature, but it is not known whether LATS is the cause of the thyrotoxic state; recent evidence would suggest otherwise.

Diagnosis is based on the presence of one or more of the cardinal (thyroid, eye and skin) manifestations. Usually the thyroid gland is involved, producing either thyrotoxicity or thyroidal autonomy manifest by failure of suppression during T_3 administration. The thyrotoxicosis can be treated with antithyroid drugs (propylthiouracil or methimazole) radioiodine, our surgery, but there is a recent tendency to employ antithyroid drugs as initial therapy, especially in younger patients. There is a high incidence of late hypothyroidism with radioiodine or surgical treatment, but these forms of therapy have distinct advantages in selected patients.

TABLE 1

Characteristics of Graves' Disease

1. Familial tendency
2. Triggering by stress
3. Separate course of thyroid, eye and skin manifestations
4. Self-limited course
5. Presence of organ antibodies
6. Transmission from mother to fetus
7. Favorable response to treatment

TABLE 2

Correlation Between Serum LATS and Thyroidal Non-suppressibility in Graves' Disease During Treatment With Anti-Thyroid Drugs

	No. Patients With				
	Positive LATS		Negative LATS		
	Sup-pressible	Non-sup-pressible	Sup-pressible	Non-sup-pressible	Total Patients
Before Rx	0	11	0	4	15
After mean 7 mo. Rx*	2	4	2	7	15

*13 of 15 favorable clinical responses—from Chopra, et al. J. Clin. Endocr. 30: ... , 1970.

TABLE 3

Abnormalities of Iodine Metabolism in Thyrotoxicosis

1—Increased iodide uptake
2—Increased rate of organification of iodine
3—Increased iodide-iodotyrosine leak from thyroid
4—Increased thyroid hormone release
5—Decreased gland colloid stores
6—Increased $\frac{T_3}{T_4}$ ratio in thyroid
7—Abnormal iodoprotein secretion from thyroid

TABLE 4

Abnormalities of Thyroid Hormone Metabolism in Thyrotoxicosis

1—Decreased serum TBG and TBPA concentrations
2—Increased serum T_3 and T_4 concentrations
3—Increased serum free T_3 and free T_4
4—Increased T_3 and T_4 utilization

TABLE 5

Important Symptoms of Thyrotoxicosis

Nervousness
Palpitations
Tachycardia
Increased perspiration
Heat intolerance
Increased appetite
Weight loss
Hyperdefecation or diarrhea
Weakness and fatigue
Personality change or psychosis

TABLE 6

Classification of Opthalmopathy of Graves' Disease*

Class	Clinical Findings
0	No signs or symptoms
1	Only signs, no symptoms—signs include upper lid retraction and stare with or without lid lag and proptosis
2	Soft tissue involvement (signs and symptoms)
3	Proptosis (>23 mm)
4	Extraocular muscle involvement
5	Corneal involvement
6	Sight loss (optic nerve involvement)

*The first letters of each definition form the mneumonic NO SPECS.

Class 1 is "mild," non-infiltrative ophthalmopathy.

Classes 2-6 each includes the manifestations of the preceding class and comprise the earlier classification of "severe" or infiltrative opthalmopathy.

From Werner, S.—Classification of the eye changes of Graves' disease. J. Clin. Endocr. 29:982, 1969.

TABLE 7

The Diagnosis of Graves' Disease

I. Clinical Manifestations
   A—Thyrotoxicosis
   B—Opthalmopathy
   C—Dermopathy
II. Laboratory
   A—Thyrotoxicosis
      1) Elevated serum thyroxine (PBI, BEI, Col. T_4, Total T_4)
      2) Increased radioiodine labelled T_3 resin (or erythrocyte) uptake
      3) High thyroid radioiodine uptake (RAIU)
      4) Failure of RAIU to suppress with 7 days of T_3 administration
      5) Elevated serum LATS concentration
III. Associated Features
   A—Lymphadenopathy
   B—Myopathy
   C—Thyroid Acropathy
   D—Lymphocytic Thyroiditis

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Cerebral Abscesses in Early Infancy

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Cerebral abscesses in six infants with onset of symptoms between age 4 days and 10 weeks are reported. The abscesses occupied the majority of one cerebral hemisphere. Because of the large size of the abscess the infants usually presented with an enlarged head, which frequently obscured the diagnosis of abscess and led to the mistaken diagnosis of hydrocephalus. Five of these infants were male and one was female. The organism was coliform in type, except in one case where pneumococcus was cultured. In half of these cases the abscess had ruptured into the ventricular system prior to diagnosis and the child thus presented with signs of meningitis in addition to the signs of the abscess. All of the abscesses that were diagnosed were treated with multiple aspirations; four were effectively dealt with, but all of these infants developed hydrocephalus and one subsequently died with a blocked shunt and one has been left severely retarded. Two of the infants seem to be doing reasonably well, and one infant died without being diagnosed.

Sparine — Demerol — Scopolamine Analgesia For Labor and Delivery

Robert L. Sherman, M.D., Ben B. Cabell, M.D., and Richard B. Clark, M.D.*

Analgesia and anesthesia for labor and delivery continues to be a vexing problem. Maternal comfort obtained with narcotics often results in fetal depression.[1] Regional anesthesia, such as spinal, epidural, or caudal block affords good pain relief in most instances, but technical expertise is required. Also, patients often object to this type of anesthesia.

Large doses of narcotics, tranquilizers and scopolamine are popular for analegsia and anesthesia throughout the state,[2] but often result in measurable depression of the newborn.[3] In this report, we would like to describe an analgesia regimen utilizing Demerol,* Sparine,† and scopolamine for labor and delivery. The patients are usually quite comfortable, yet seldom are over 100 mg meperidine administered during any one labor. No narcotic antagonist is needed. Only perineal anesthesia is required, and the infants are usually born in good condition.

Methods and Materials

Private labor patients were selected in a random manner, the main criterion being that they would deliver during the ordinary work week, so that laboratory studies could be obtained. Patients with vertex or breech presentation, single or multiple fetuses, membranes intact or ruptured, were admitted to the study. Analgesia was with intravenous and intramuscular doses of Demerol, Sparine and scopolamine, the exact sequence of which will be described shortly. Perineal anesthesia was obtained with local or pudendal block.

At delivery, the one minute Apgar score was determined, and a doubly clamped section of umbilical cord collected.[3] Blood from the umbilical arteries and vein were aspirated into heparinized syringes, and analyzed for pH, pO_2, pCO_2, and negative base excess, with Instrumentation Laboratories pH, oxygen and carbon dioxide electrodes. Base excess was determined from the nomogram of Sigaard-Andersen.[4] At an hour of age, catheters were inserted into one of the umbilical arteries, and the umbilical vein, of the infant, and blood drawn for the above analyses.

In describing our medication study, we ordinarily start with Demerol 25-50 mg with Sparine 25 mg and scopolamine 0.65 mg, given half IV and half IM or all IV if the patient is making rapid progress. We ordinarily repeat one-half of this in no less than 15-20 minutes and only if the patient is not yet fully sedated. Subsequent doses will vary between 12.5 to 25 mg Demerol; 12.5 mg Sparine; scopolamine 0.3 mg to 0.1 mg IV as the patient's comfort dictates. If the labor tends to lag, we will stimulate with 5-10 units of syntocinon in an IV drip of 5% Isolyte—R.* Amniotomy is performed as soon as labor is well established and cervical dilatation is progressing, so long as the vertex is well engaged in the pelvis.

The degree of analgesia (excellent, good, fair, poor) was assessed by the obstetrician during labor. The pediatrician assessed the general condition of the infant on admission to the nursery, and at one hour of age. Respiratory rate was recorded on admission, and at one hour of age.

Apgar score gives an overall evaluation of the infant at birth. Acid-base and blood gas studies at birth indicate whether the "normal" degree of asphyxia is present at birth, or has been accentuated by obstetric or anesthetic complications. Blood from the umbilical artery at birth gives an indication of fetal condition; from the umbilical vein, the biochemistry of the placenta. Narcotics and sedatives given during labor do not ordinarily (unless there is maternal hypoventilation) affect acid-base status of the fetus, but if there is a depression after birth, it is indicated by increase in carbon dioxide tension and decrease in oxygen tension, resulting from hypoventilation. Blood gas and acid-base measurements are simpler and more accurate an assessment of respiratory function, than such respiratory studies as tidal or minute volume.

The term negative base excess, or base excess, deserves some explanation. It is an indication of the metabolic component of the acid-base picture.

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* Meperidine, Winthrop Laboratories.
† Promazine, Wyeth.

* Abbott Laboratories.

Carbon dioxide tension indicates whether a derangement is resultant from respiratory acidosis or alkalosis; base excess indicates whether a derangement is a metabolic acidosis or alkalosis. The normal base excess in adult arterial blood is $\pm$ 2.5 meq/L[5]; newborn infants characteristically demonstrate a metabolic and a respiratory acidosis, due to the labor process.

Normal adult arterial values are: pH 7.43, pO_2 95.0, pCO_2 40.0.[3] "Normal" values for umbilical artery blood at birth are: pH 7.22, pO_2 22.4, pCO_2 56.5, and base excess, –6.0. Values from the femoral vein at one hour of age are: pH 7.31, pO_2 39.9, pCO_2 44.2, base excess –4.5.[3]

Results

Sixty-one patients were studied. Their average age was 23.0 years, with a range of 16-35 years. The average gravity was 2.0 pregnancies (range 1-5) and average parity, 0.7 (range 0-4). One mother suffered from toxemia, four had premature ruptured membranes, there was one set of twins and one breech. Ten mothers underwent oxytocin induction; twelve received oxytocin augmentation of labor.

Thirty-five of the mothers were graded as having excellent analgesia during labor, twenty-three good, three fair, and poor, none. Thirty-three received local anesthesia for delivery, twenty-three pupendal, and five, no anesthesia except the analgesia regimen.

The average total dose of Demerol per labor was 88.0 mg (range 25-150); Sparine, 59.0 mg, and scopolamine, 1.0 mg. Only nine mothers of the 61 required over 100 mg of Demerol. The average number of doses of the medication mixture was 3.0 (range 1-6). The average time interval between the first dose and delivery was 3 hrs. 33 minutes (range 27 minutes—10 hrs. 55 minutes).

One mother developed hypotension 6 minutes after delivery. This was corrected with fluid infusion.

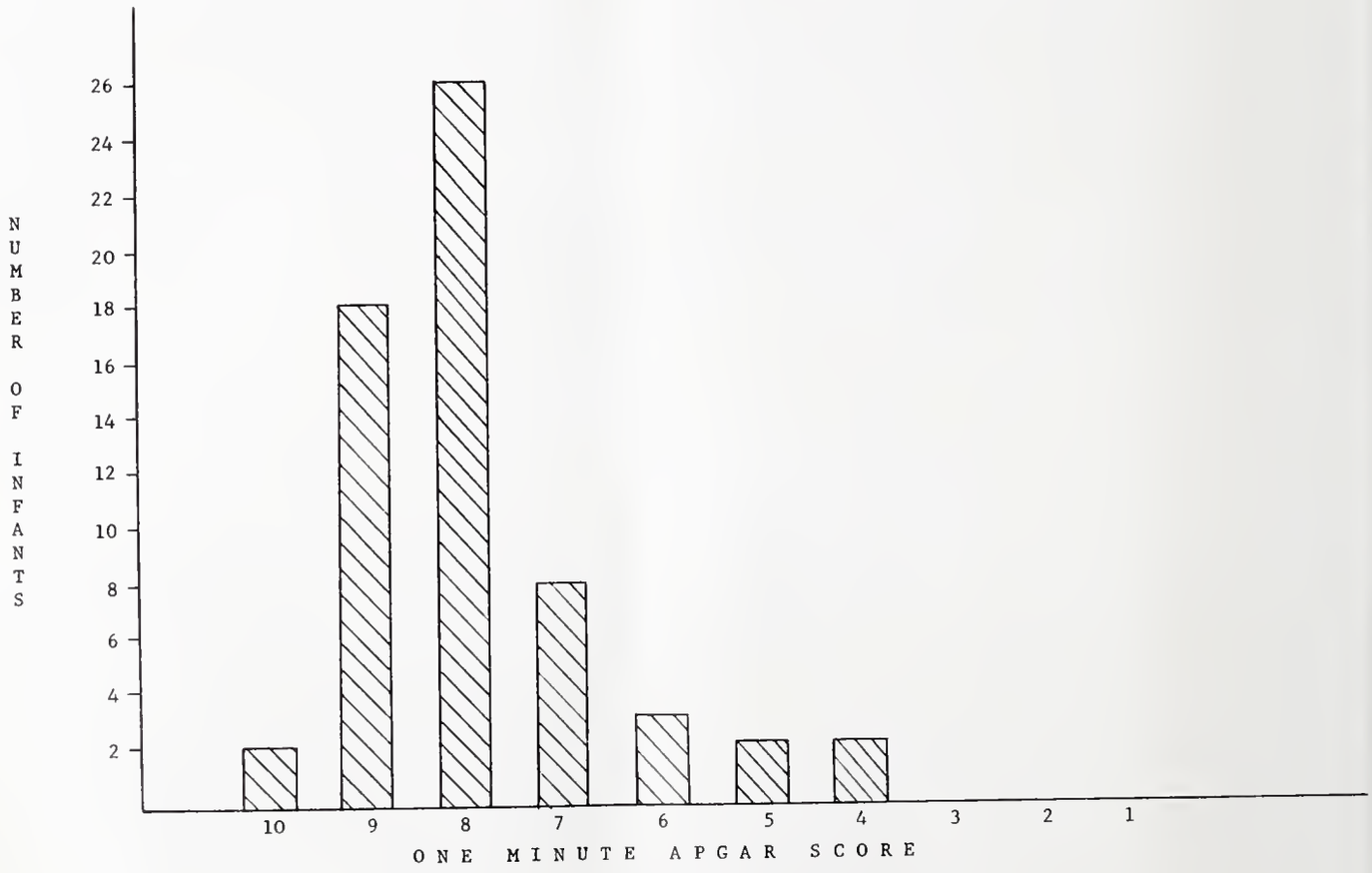
Three deliveries required the use of midforceps rotation. The other infants were delivered either spontaneously, or with elective low forceps.

Only seven of the infants had a one minute Apgar score of 0-6 (11%) (Figure I). The second twin, of the twin gestation, had an Apgar 4 at one minute, and is not included in these data, as no blood gas studies were done on this infant.

Particulars concerning the seven depressed infants are given in Table I.

Blood gas and acid-base studies of the umbilical artery and vein blood, both at birth, and at one hour of age, are shown in Table II. Only

Figure 1 — Apgar Score Distribution



the last 50 infants had acid-base studies, as technical difficulties were slowly worked out. All infants, however, had Apgar scoring.

Fifty-eight of the infants were evaluated by the pediatrician on admission to the nursery as being in "excellent" or "good" condition. There was one fair, and two poor infants. At one hour of age, sixty were considered to be "excellent" or "good," and one, poor. The "poor" infant manifested the Klippel-Feil syndrome and numerous other congenital anomalies, including ventricular septal defect and patent ductus arterious.

The average respiratory rate on admission to the nursery was 43; at one hour of age it was again 43.

Discussion

The regimen described, composed of small intravenous and intramuscular doses of Sparine, Demerol and scopolamine, produces good analgesia, with little fetal depression. Most of the patients labor quietly, and have no recall of this experience. Hypotension is not a problem. The total dose of Demerol seldom exceeds 100 mg, and only perineal anesthesia is required for delivery. Our regimen resembles a previously published report by Sprague,[6] but differs in several respects, including the use of regional, rather than general anesthesia in our series, and a higher total dose of Sparine.

The infants were evaluated by Apgar score, and in the last 50 infants, by acid-base and blood gas studies. Acid-base studies were chosen as they clearly show any respiration depression. pH, pO_2, pCO_2, and base excess at birth in both umbilical artery and vein show a mild respiratory and metabolic acidosis. This is not as severe as reported previously, in normal infants.[3] The one hour sample would show any residual narcotic depression, and there is none. There is a difference in oxygen tension between artery and vein at one hour, but not in pH, pCO_2, or base excess. This similarity between artery and vein after birth substantiates previous findings.[7]

The one hour acid-base studies indicate a pH of approximately 7.33, a pCO_2 of about 38, and a base excess of −6.0. These are similar to values obtained from normal infants delivered under non-depressing anesthesia,[3] and presumably show that the Demerol—Sparine—scopolamine regimen does not interfere with the recovery from birth asphyxia of these infants.

Fifty-eight of the 61 mothers were graded by the obstetrician as having "excellent" or "good" analgesia during labor. Yet, only 9 of the 61 received over 100 mg Demerol. Many did not recall their labor and delivery. Only one of the patients (she did not wish to be rendered unconscious and received only one dose of the mixture) was "wild."

The depressed infants are listed in detail in Table I. Patients 1, 3, 4, 5, and 6 apparently were depressed from obstetric complications. The cause of depression of the other two is obscure. It is of significance that not one of the 61 infants appeared to be depressed from the medication. Apgar scores of the group as a whole were excellent.

All but one of the 61 infants was graded, by the pediatrician, as being in "excellent" or "good" condition at one hour of age. This infant had the Klippel-Feil syndrome, and congenital heart disease. Respiratory rates were satisfactory both on admission to the nursery and at one hour of age.

Summary

A series of 61 obstetric patients is reviewed. All received a Demerol—Sparine—scopolamine mixture for labor and delivery. This mixture, in small doses, produced very satisfactory analgesia, without maternal hypotension. The infants were born in good condition, with only seven of the 61 infants exhibiting low Apgar scores. Blood gas and acid-base studies on the infants did not evidence respiratory depression, either at birth, or subsequently. This analgesic regimen, which does not use heavy narcotic doses, or a narcotic antagonist, would seem a good substitute for regimen utilizing larger amounts of narcotics or fetal depressing drugs and anesthetics.

Acknowledgment

The authors would like to thank Mr. Newt Pillstrom, Chief of the Clinical Laboratory, Sparks Medical Center, Fort Smith, Arkansas, for his technical help with this project.

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TABLE I

THE SEVEN DEPRESSED INFANTS

	Maternal Age	*Grav.*	*Par.*	*Apgar*	*Total Demerol*	*Sparine*	*Umb Art pH At Birth*	*Comments*
1.	20	2	1	4	100	75	7.12	Midforceps. Tight nuchal cord.
2.	20	1	0	5	75	50	7.34	Two doses Demerol-Sparine-Scopolamine. Last dose 2 hrs. 5 min. before delivery.
3.	20	3	0	6	137	87	7.21	Midforceps rotation and extraction.
4.	25	3	2	5	100	50	7.23	Infarcted placenta post mature.
5.	31	1	0	6	100	62	—	Long second stage.
6.	26	2	1	4	100	50	—	Shoulder dystocia-tight nuchal cord.
7.	21	4	3	6	25	25	7.39	—

TABLE II

ACID-BASE AND BLOOD GAS AVERAGE VALUES ON THE LAST 50 INFANTS

	BIRTH (Clamped Cord Section)		ONE HOUR (Umbilical Artery and Vein Catheter)	
	Umbilical Artery	Umbilical Vein	Umbilical Artery	Umbilical Vein
pH	7.28	7.34	7.33	7.32
pO_2 (mm Hg)	19.0	28.0	68.2	46.7
pCO_2 (mm Hg)	44.8	41.1	37.7	39.3
BE (meq/L)	−7.6	−4.0	−6.0	−5.8

Epidemologic Investigation of Hand, Foot, and Mouth Disease

J. L. Adler et al (National Communicable Disease Center, Atlanta 30333)

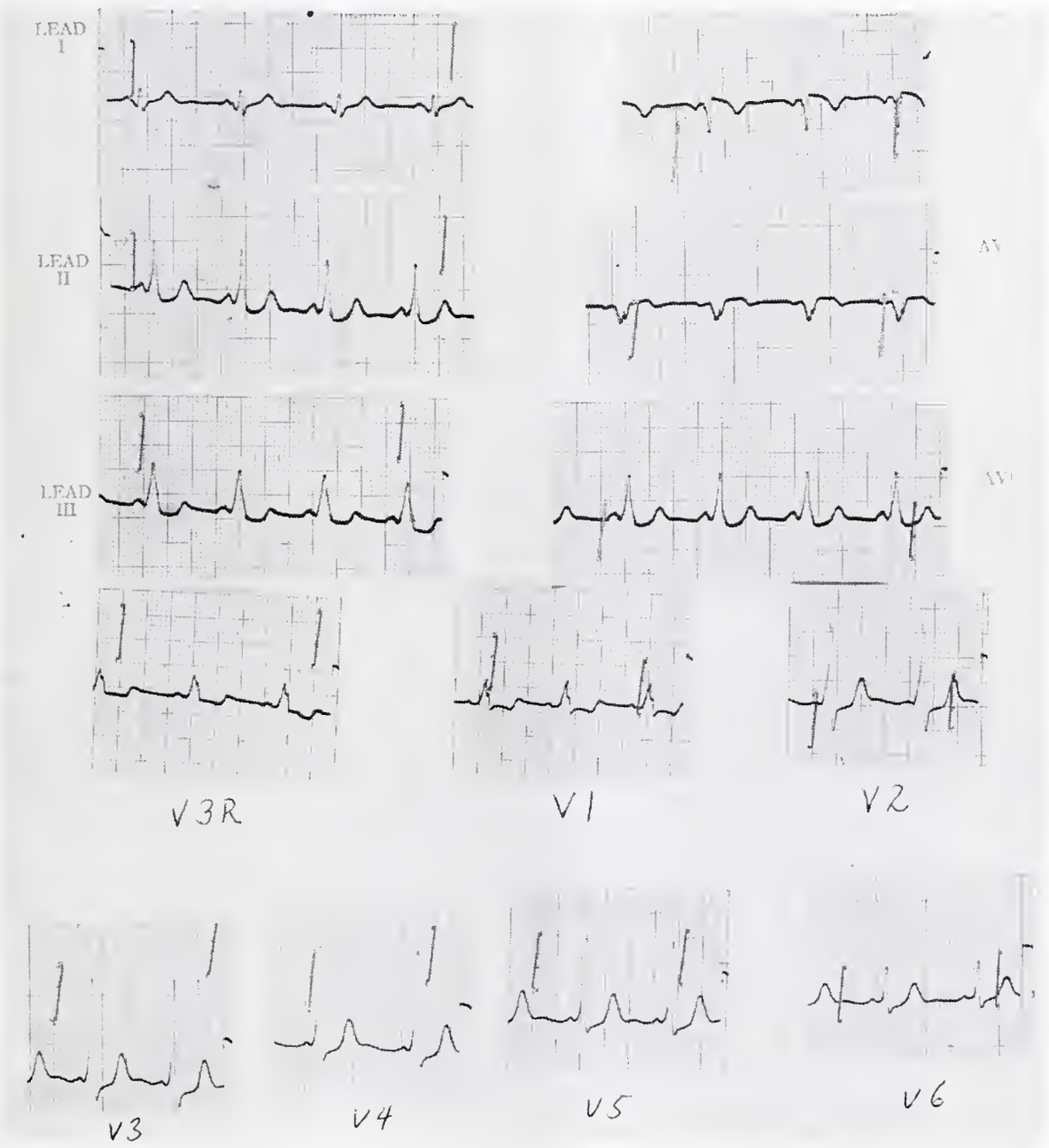
Amer J Dis Child 120:309-313 (Oct) 1970

An outbreak of hand, foot, and mouth disease caused by coxsackievirus A16 occurred in Baltimore during the summer of 1968. Cases were identified in several sections of the city. The presenting complaints were sore mouth, anorexia, and rash. An exanthem, primarily on the hands and feet, was noted in 85% of the cases and all cases were associated with stomatitis. In 20 to 25 (75%) presumptive cases studied, the patients were shown to be infected with coxsackievirus A16, and 44% of asymptomatic family contacts also showed evidence of infection with the virus. Seventy-five percent of the patients with laboratory-confirmed disease were under 5 years of age and 53% of the positive family contacts were adults. The fact that many adults and older children were found to be infected with coxsackievirus A16 probably indicates that the population had not been exposed to the virus before.

ELECTROCARDIOGRAM OF THE MONTH

AGE: 60 SEX: Female BUILD: Medium BLOOD PRESSURE: 132/85 both arms
CARDIAC DIAGNOSIS: Recurrent tachycardia.
OTHER DIAGNOSES: None.
HISTORY: Paroxysms of fast heart rate since age 5 precipitated by nervousness, etc., lasting from a few minutes to several hours, vomiting and belching may terminate the paroxysm.

See Answer on Page 301



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 301

Robert L. Fincher, M.D.

HISTORY: This eleven-year-old girl sustained trauma to the shoulder two weeks prior to admission.

PH

PUBLIC HEALTH AT A GLANCE

New Emphases in Public Health Nutrition Services

The Maternal and Child Health Division of the State Department of Health has the only staff of professional nutritionists in any state agency. The staff consists at present of one Chief Nutritionist, two full-time, and two half-time district nutritionists. Nutritionists are required to have an M.S. in Nutrition as applied to Public Health and/or a one year hospital internship in dietetics which is approved by the American Dietetic Association. The nutrition program is medically oriented and community centered. Twenty-six counties receive the services of a district nutritionist on a regularly scheduled basis, and a map shows which counties have these services. Counties which are not assigned a nutritionist on a regular basis may receive help on an emergency basis from the State Office. Fifty-one counties received some kind of service from nutritionists last year. In addition, most counties received diet manuals and other educational materials.

Diet Manual Revision

The *Arkansas Diet Manual* is being updated and revised. Mrs. Maxine Hinton, Ph.D., and Mrs. Ocrie Lambert, M.S., are presently working on the revision and hope to have it available for distribution by September 1, 1971. Dr. Hinton is Chairman of the Diet Therapy Section of the American Dietetic Association. Mrs. Lambert is a Nutrition Consultant with the State Health Department. The Public Health Committee of the State Medical Society is working with the editors of this revision. Dr. Ben N. Saltzman chairs this committee. The Arkansas Dietetic Association has also appointed a committee to work with the editors.

The Manual will be expanded to include certain diets for the first time. There has been growing interest on the part of Arkansas' physicians in the treatment of cardiovascular patients which includes dietary manipulation as based on recent research. In response to this interest, the Manual will include the five modified diets outlined by Dr. Donald S. Fredrickson and Dr. Robert A. Levy of the National Heart and Lung Institute, Bethesda, Maryland. The Manual will be a loose-leaf booklet to facilitate revision on a sectional basis as new information is available.

Arkansas was the first state to have a state diet manual in 1950. This will be the fourth edition. As most Arkansas physicians know, the Manual and diet sheets printed especially for the patient are furnished, free of charge, to physicians and hospital staffs in the state. Requests are filled for approximately 90,000 diet sheets and approximately 700 diet manuals each year. Arkansas' manual has always been designed for use of professional personnel and distribution is restricted.

Family Planning and Nutrition

A new emphasis in the Nutrition Service Program is nutrition counseling services for patients seen in Health Department Family Planning Services. Clinics are now held in 58 of Arkansas' 75 counties. Nutritionists attend as many of these clinics as possible to teach normal family nutrition with special emphasis on use of low cost foods. The ultimate purpose of family planning is to improve the quality of family life. Nutrition plays an integral part here. One goal of nutrition counseling during the inter- and pre-conceptional period is improved health and nutritional status of the mother, thereby improving the health of any future children and lowering maternal and infant mortality and morbidity. It is also hoped that by educating the mother, the whole family will be influenced toward better eating habits.

Nutrition Services and Poverty Related Programs

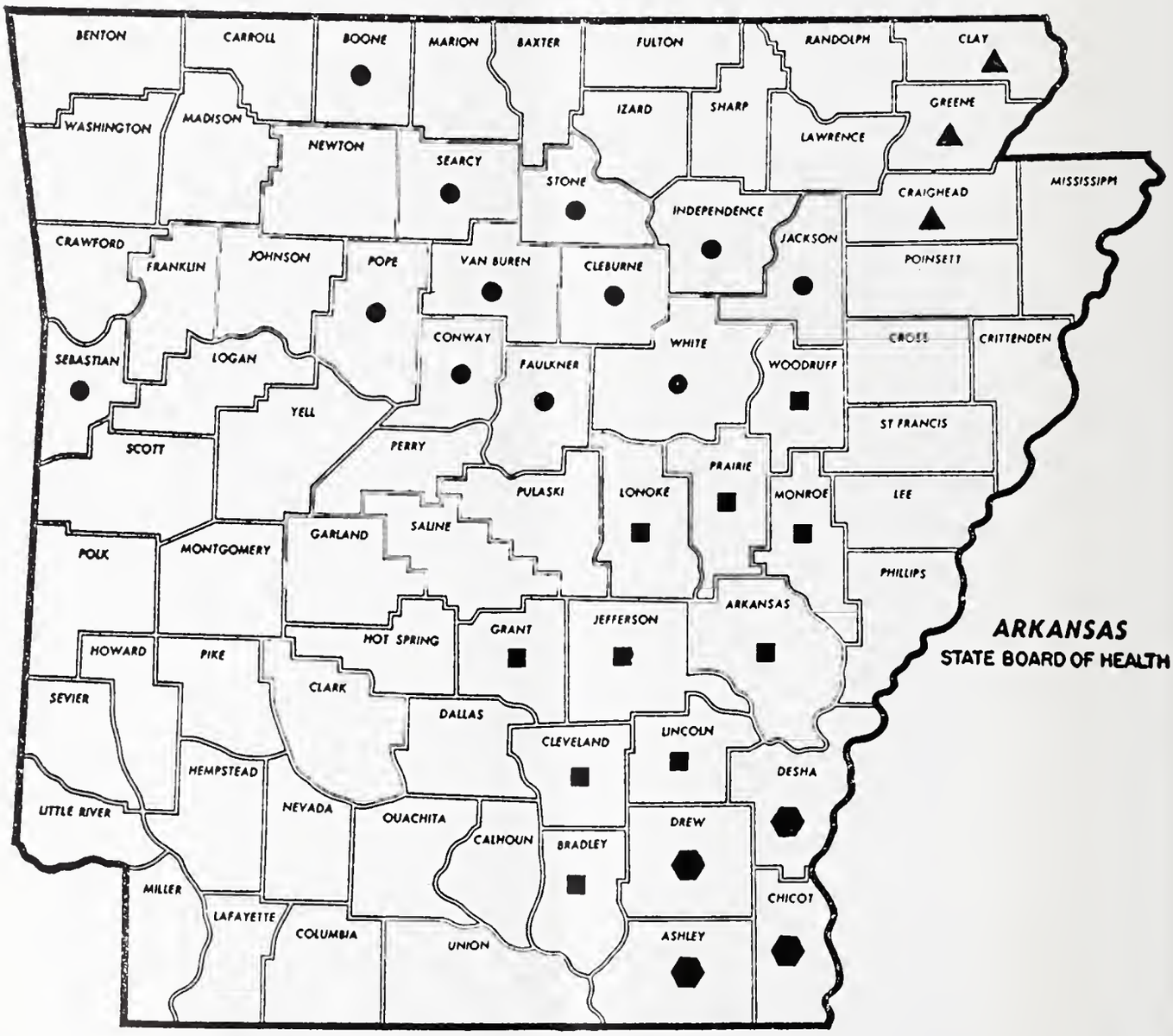
In the interest of getting the most mileage out of federal dollars, and the best possible foods and nutrition programs for all segments of the public, Nutrition Staff members work closely with other

agencies which have nutrition related activities. Counseling is given upon request to Model Cities Projects, Day Care Centers, and Head Start Programs, and to a variety of poverty agencies. Services include program planning and on-the-job training experiences for dietary aides and community aides who work directly with poor families.

Phenylketonuria—(PKU)

Nutritionists give concentrated service to families of PKU patients. In this disease medical management is dietary control. It is necessary to record and evaluate literally every spoonful of food eaten by the child. These children are given priority for service. Visits may be made several times a month in the beginning and dietary monitoring and counseling of parents may be done for several years. At present 6 patients are getting this service. The Maternal and Child Health Division is able to furnish the formula diet to these patients if financial need exists. As in all dietary counseling done by nutritionists the advice to patients is given only under supervision of the patient's physician. Service has also been given to patients with galactosemia, Maple Sugar

NUTRITION SERVICES
Maternal and Child Health Division
Arkansas State Department of Health



Mrs. Patricia Raines, Chief Nutrition Consultant, MCH Division, Ark. Dept. of Health

DISTRICT NUTRITIONISTS:
- ■ Mrs. Kathleen Brown, Nutritionist, Jefferson County, Pine Bluff
- ⬢ Mrs. Jo H. Jackson, Dietitian, Drew County, Monticello P/T
- ▲ Mrs. Sarah Jo Morse, Dietitian, Craighead County, Jonesboro P/T
- ● Mrs. Ocrie M. Lambert, Nutritionist, Cleburne County, Heber Springs

Urine Disease, and other inborn errors of metabolism.

Traditional Services

Nutrition staff are still providing the traditional counseling in maternity, well baby, and other regularly scheduled Health Department clinics. They serve as resource people to Public Health Nurses, and other health personnel. They also serve as resource people to teachers in public and private school systems, social workers, and directors of day care centers, or other facilities which feed groups of people. Nutrition Staff averages about 1500-2000 consultative services to other professionals and about 4500-5000 counseling services directly to patients or other individuals each year.

ANSWER—Electrocardiogram of the Month

RATE: 84 RHYTHM: Sinus

PR: 0.10-0.12 QRS: 0.10-0.12 QT: 0.36-0.40

SIGNIFICANT ABNORMALITIES:

Short PR interval, delta waves, generalized ST segment depression, prolonged QRS duration.

INTERPRETATION: Abnormal

Wolff-Parkinson-White Syndrome (Short PR interval with abnormal QRS Complexes and Paroxysmal Tachycardia).

REFERENCES:

1) Wolff, L., Parkinson, J., and White, P. D.: "Bundle Branch Block with short PR interval in healthy young people prone to Paroxysmal Tachycardia." Am. Heart J. 5:685, 1930.

2) Chung, K. Y., et al.: "Wolff-Parkinson-White Syndrome." Am. Heart J. 69:116, 1965.

ANSWER—Radiology Case of the Month

DIAGNOSIS:

Solitary (unicameral) bone cyst of the humerus with pathological fracture.

DISCUSSION:

Solitary or unicameral bone cyst is a lesion of childhood and adolescence. About 75% occur at the proximal ends of the shafts of the femur and humerus. The lesion is usually asymptomatic unless fracture occurs, but may occasionally cause local pain.

Radiographic features include:

1. The lesion usually occurs in the proximal shaft or metaphysis.
2. The cortex is eroded and thinned, but is intact unless a fracture has occurred.
3. There may be fusiform widening of the bone.
4. Fine trabeculation may be seen through the lesion.
5. Evidence of a recent or healed pathological fracture is common.

After sustaining fracture some cysts will recalcify and heal, others do not and require surgical curettage and the placement of bone chips within the cavity. The prognosis for permanent cure is excellent.

REFERENCE:

Paul and Juhl: The Essentials of Roentgen Interpretation, Hoeber Medical Division, Harper and Row, New York, 1966.

Immunosuppression and the Guillain-Barre Syndrome

D. A. Drachman et al (Northwestern Univ School of Medicine, Chicago 60611)

Arch Neurol 23:385-398 (Nov) 1970

A patient developed typical Landry-Guillain-Barré (LGB) polyneuropathy while on an immunosuppressive regimen following renal transplantation. Both circulating antibody and lymphocyte-mediated immunologic competence were markedly impaired at the time of development of the neuropathy. This is of particular interest since the leading current hypothesis suggests that the LGB neuropathy is due to an autoimmunte disorder. LGB neuropathy may be the clinical manifestation of a variety of insults to nerve and not always an autoimmune disorder. Immunosuppressive therapy, even in effective doses given before the onset of clinical neuropathy, may have no effect on the illness.

Reversible Left Ventricular Failure in Angina Pectoris

B. S. S. H. Taylor (General Infirmary, Leeds, England)

Lancet 2:902-906 (Oct 31) 1970

Clinical, electrocardiographic, and hemodynamic observations were made on six patients with uncomplicated angina pectoris and six normal controls during rest and during supine leg exercise. During angina precipitated by exercise, the most striking clinical finding was breathlessness due to acute left ventricular failure. The rapid disappearance of symptoms after stopping exercise was accompanied by a rapid return to normal of left ventricular function. The deterioration in left ventricular function was accompanied by striking and equally rapidly reversible electrocardiographic ST depression. The production of angina may be explained predominately by the hemodynamic consequences of the acute left ventricular failure.

EDITORIAL

An Area for Medical Leadership

Alfred Kahn, Jr., M.D.

Organized medicine has some legitimate areas in which it can and should exert leadership. There are large areas pertaining to the general field of medicine in which the profession would like to exert leadership, but cannot due to the fact that medicine is just one part of our total socio-economic structure. The milieu in which we practice may make certain goals unattainable at the present time, despite the merit of the sought after end.

One of the areas, where organized medicine can and should exert leadership for the benefit of the public and the affected professions is the planning, training, and usage patterns of nursing and the so-called paramedical groups. The so-called population explosion will force medicine and its allied professions into the most efficient use of manpower to protect this nation's health. Currently there is not an adequate program for training nurses and paramedical personnel to varying levels of competence. Furthermore, there should be some overall program to integrate this type of training into an overall plan. Saying this differently, there should be one to four years of training in the nursing and paramedical professions. A spectrum of competency does not mean ill trained personnel at the lower levels of training, but simply a narrower field of activity. There should be possible escalation from one level of competence to the next, and there must not be any artificial barriers to this. It is wasteful for example, for an internist to have a laboratory technologist trained to research level or even trained to a level to do all the tests performed in a hospital. General physicians need laboratory work that is just as accurate as the internist or the hospital, however, they do not need an office technologist trained to the level necessary for the office of an internist or the laboratory of a hospital. The same is true in radiology, general physicians practicing in small communities need some X-ray studies, urologists need some X-ray studies, gastro-enterologists need some X-ray studies—but none of these physicians need radiologic technologist trained to the level of competence of a hospital radiology department; accuracy is needed, but variety of studies can be limited.

There is a real need for nurses and paramedical personnel to be trained in a step wise manner. It is also important that the individual technologist can move up to another higher level of competence if he or she desires to do so.

If a system is set up with nurses and technologists, trained to different levels of proficiency, it will be necessary to do two things. First of all, there should be a consolidation of the program for nurses training under the guidance of the organized medicine, this means a genuine effort to put aside any internecine bickering and to accomplish under one agency the training and professional accrediting of all stages of nursing and technology training. Secondly, the system of nomenclature of nurses and technologist is chaotic; individuals with different levels of training should be clearly distinguished by name and by badge or other identifying symbol both for the sake of the public and the rest of the interrelated disciplines.

The professional training of nurses and technologists is improving. These comments are suggested not to degrade the good work being done in these areas, but to offer a further means of improving manpower usage and to increase flexibility in these professions.

MEDICINE IN THE NEWS

NATIONAL AMBULATORY MEDICAL CARE SURVEY

The National Center for Health Statistics in the Department of Health, Education and Welfare, as part of its continuing program to provide data on the health status of the American people, is currently planning the National Ambulatory Medical Care Survey (NAMCS). The purpose of the NAMCS is to collect objective, quantitative information which can be used to describe the types of ambulatory patients seen by physicians, the nature of the patients' problems and the resources for their care. This information is needed by leaders in medicine and related professions for planning and organizing health services, for planning efficient utilization of health facilities and manpower, and for determining modifications in medical education.

The survey will involve a national sample of physicians who will be requested to provide data concerning a small number of the ambulatory patients they see. When the NAMCS is in full operation (sometime in 1972), about 3,000 physicians each year will be providing data on an estimated 240,000 ambulatory patient visits. Physcians selected to participate in the survey will provide information concerning a sample of the patients that they see during a two-day period in each of four consecutive calendar quarters. All physicians will be replaced by new sample physicians after participating for four quarters. The types of data the survey will collect include age, sex, and medical problems of patients plus treatment prescribed and laboratory tests performed for patients. Of course, all data will be held completely confidential and used only for statistical purposes.

Ambulatory medical care is by far the largest segment of the American health services system in terms of prevalence and volume. Yet, little has been done on a national scale to gather reliable information for use in planning and research. The dearth of information on this subject has led leaders in the medical profession to persuade the National Center for Health Statistics to undertake the National Ambulatory Medical Care Survey. This information will complement the health data already being obtained by the Center through its ongoing national surveys: the Health Interview Survey, Health Examination Survey, and Hospital Discharge Survey. The success of the NAMCS, of course, will depend on the cooperation of practicing physicians who are the major source of ambulatory medical care data.

The American Medical Association and numerous other major medical associations have expressed their support for the NAMCS and have provided advice and consultation in its development. With the cooperation of practicing physicians the survey will provide very valuable data for documenting the health status of the American people and for informing public and private policy decisions.

THE MONTH IN WASHINGTON

Rep. Wilbur D. Mills (D., Ark.) expressed concern about claims that prepaid group health care, or health maintenance organizations, could solve most of the problems of Medicare and Medicaid.

Speaking to a group of business executives, the chairman of the House Ways and Means Committee, which handles Medicare and Medicaid legislation, said that he believed health maintenance organizations were "a reasonable and perhaps competitive alternative" for providing government-financed health care.

"However," he added, "I have become concerned that we will expect a great deal more from them than is likely to occur. The health industry is too diversified and its problems too complex to ever conclude that any one approach will solve most or all of the problems."

Americans broke a spending record for health care this past year, paying out about $70 billion for everything from aspirin to hospitals, Mills also said. Inflation accounted for half the boost

of about 16 per cent over the $60.3 billion spent in the previous fiscal year, he said.

Mills said he expects health care spending figures for fiscal 1970, which ended July 1, would show that $7 out of every $100 spent in the United States for all goods and services went for health expenditures. "Just three years ago," Mills said, "it was estimated that we would not reach the 7 per cent level until 1975."

He noted, however, that the fiscal 1970 figures would show "for the first time" that federal spending did not increase as fast as private spending for health services.

"The reason for this development is that the Medicare program did not grow as fast as it had been growing," Mills said.

Mills said the new health care figures point out two major characteristics of the health industry—"rapidly escalating costs and rapidly increasing public involvement."

"Public funds now pay for one-half of all the hospital care provided in the country," Mills said. "Medicare and Medicaid together account for almost all of the half."

* * *

National health insurance is shaping up as one of the major domestic issues before the 92nd Congress with catastrophic illness coverage gaining support from both Democrats and Republicans.

Advocates of catastrophic coverage counted on the Nixon Administration supporting such a plan although Elliot L. Richardson, Secretary of Health, Education and Welfare, called for its rejection at that time when it unexpectedly was placed before the Senate Finance Committee in executive session late last year near the end of the 91st Congress. But he left the door open for Administration support later.

"A proposal with this impact on the health care system deserves the closest kind of examination, not the hasty look it has been given in the waning days of an executive session," Richardson said.

The Secretary's comment was in response to the surprise announcement by Sen. Russell B. Long (D., La.) that he would offer a catastrophic illness coverage plan to the Finance Committee of which he is chairman.

Long's plan called for the government to pay 80 percent of all medical costs beyond the first 60 days of hospitalization or the first $2,000 of physicians' bills for all Americans who pay Social Security taxes and are under 65. He estimated the cost at $2.5 billion a year to be financed by a one-half of one percent increase in Social Security taxes, to be shared equally by employers and employees.

The American Medical Association also cleared the way to add catastrophic coverage to its Medicredit plan for voluntary national health insurance. The House of Delegates at the AMA 1970 clinical convention in Boston approved a report of the Board of Trustees listing catastrophic coverage among the modifications and improvements being considered before reintroduction of the Medicredit legislation.

All national health legislation introduced during 1969-70 died with the final adjournment of the 91st Congress, and some modifications were expected to be incorporated in most of the leading proposals before their reintroduction in the 92nd Congress.

Rep. Durwood G. Hall (R., Mo.), a physician, introduced during the final months of the 91st Congress legislation that would establish a government program of catastrophic illness insurance for all Americans along with a program of basic health care protection for the medically indigent.

Part A (Basic Protection) of Hall's proposal would replace the present Medicaid program. Each state would be authorized to determine the level of medical indigence in that state and to purchase, from private carriers, basic health insurance coverage for the medically indigent. The states would receive federal reimbursement for 85 percent of the costs incurred in providing this basic coverage.

The states would also purchase coverage for the costs of catastrophic illness expenses for the medically indigent. There would be no federal reimbursement for this state coverage.

Part B (Catastrophic Coverage) would have the Secretary of HEW establish a program of insurance against the costs of catastrophic illness. Any U. S. resident whose income is above the level of medical indigence would be entitled to reimbursement for expenses incurred as a result of catastrophic illness. Federal reimbursement would be 90 percent of total eligible expenses.

Eligible expenses would be those health care costs above whichever of the following is the larger: (a) $1,000 for those 65 or $5,000 in any other case, or (b) 25 percent of the gross income of the individual or his family.

Funds for this two-part program would be managed by a Federal Health Care Trust Fund. Money for this trust fund would be raised through

a 0.4 percent tax on wages and self-employment income, and on other income in excess of $2,000 up to the maximum income in use for purposes of the Social Security tax. There would also be a 0.4 percent employer tax.

Hall estimates that the Part A would cost the federal government about $3.7 billion a year. The cost to the states for Part A would be about $600,000. Medicaid presently costs the states about $2.5 billion.

There was no estimate as to the cost of Part B, but Hall said that it would be only a small fraction of the cost of a comprehensive national health insurance program of the type being pushed by organized labor.

"All government efforts to date have been directed at providing first-dollar coverage," Hall said. "Invariably, first-dollar coverage entails high administrative costs, for it requires that many small claims be processed. Thereby the substance of the program is eroded. My aim is to amend and to protect existing law or substitute therefor so that the public can be insulated from disastrously high costs; give meaningful relief to those hardest hit by extensive medical expenses; make the existing program work easier; and at the same time make the greatest use possible of the dollars available."

* * *

Congress in the final days of the 91st Congress approved two important medical bills dealing with family practice and birth control.

The main feature of the family practice legislation authorized a three-year, $225 million program to help medical schools establish and operate departments to train family physicians.

The legislation passed the Senate and House with virtually no opposition. It was supported by the American Academy of General Practice and the American Medical Association. The Nixon Administration opposed it, mainly because of its categorical grant character.

Only nine U. S. medical schools already have established departments of family practice, and chief sponsors of the legislation hailed its passage as an important step toward alleviating the shortage of family physicians and slowing down the trend to specialization in the practice of medicine. It was praised as "a significant step in the efforts of Congress to meet the health crisis facing this nation."

A family planning bill authorizes birth control services, except abortion, for all American women who cannot afford them. The birth control services will include contraceptive drugs and devices, as well as consultations, examinations, and instruction.

The legislation also provides for federal aid for birth control research and establishes an Office of Population Affairs in the Department of Health, Education and Welfare.

To finance the program for the first three years, House-Senate conferees agreed on a compromise authorization of $387 million. The House had approved $267 million for three years and the Senate, $967 million for five years.

Expenditure of federal funds for abortion is prohibited.

* * *

A special panel of Senate consultants urged a multi-billion dollar crusade against cancer to erase its "staggering" impact of death and suffering on all mankind.

In a brief but detailed report to the Senate Labor and Public Welfare Committee on its four-month study of the disease, the 26-member panel estimated that 50 million Americans now living will develop the disease and that 34 million of them will die unless immediate steps are taken to curb it.

The consultants recommended a sweeping program keyed to consolidation of all existing cancer research projects into a national cancer authority directly responsible to the President.

"The Committee is unanimously of the view that the conquest of cancer is a realistic goal if an effective national program along the lines in the report is promptly initiated and relentlessly pursued," said Benno C. Schmidt, co-chairman of the group.

"Given the seriousness of the cancer problem to the health and morale of our society, this allocation of national priorities seems to be open to serious question," the panel said.

It recommended doubling cancer research spending to $400 million in the 1972 fiscal year, and increasing it by $100 million to $150 million in subsequent years to a $1 billion level in 1976.

The panel said their recommended program "is so important to the American people and to the world" that the money should be spent even if taxes have to be raised to pay the bill.

The panel of consultants, which included labor and civic leaders as well as distinguished cancer researchers, said that the program should be de-

voted primarily to research into the causes and cures of cancer, rather than to patient care.

The panel said that the cost of cancer has been estimated "as high as $15 billion per year," of which as much as $5 billion is spent on caring for patients. The balance is in the loss of earning power and productivity.

It said that only 89 cents was spent last year for each man, woman and child in the United States on cancer research, compared with $140 per capita on national defense, $125 for the Vietnam war, and $19 each on space programs and foreign aid.

Professional Ideals
A Report of the Judicial Council

ADOPTED BY THE HOUSE OF DELEGATES, DECEMBER 1, 1970

Recently many letters have been received by the Judicial Council complaining of an apparent preoccupation by an increasing number of physicians with the financial aspects of their medical practice.

The Judicial Council reaffirms that the laborer is worthy of his hire and the physician is entitled to reasonable compensation for the service he performs. At the same time, the Council must point out that the "prime object of the medical profession is to serve humanity; reward or financial gain is a subordinate consideration."

In 1934 the House of Delegates said "one of the strongest holds of the profession on public approbation and support has been the age old professional ideal of medical service to all, whether able to pay or not." The Council believes it would be helpful if the House were to reaffirm that policy at this meeting.

Some physicians seem to believe that the practices of business enterprises should be utilized by physicians in order to "encourage prompt attention to medical accounts." They ask, "Why shouldn't we be paid as soon as the dry goods store, the grocer, or the TV service man?"

Ideally, the physician should be paid promptly. If the physician is not paid as promptly as other creditors he should recall that he is a professional man with all the perquisites that that term implies. Our patients in large number carry insurance to cover the cost of medical services. (They do not insure payment of the cost of other professional or business services to any notable extent.) Governmental programs have been instituted and are being developed continually to provide payment for medical care to those who are unable to provide this payment.

If the profession were to cast aside its ideals and traditions and adopt the practices of business, trade or industry in dealing with patients, then the profession would be casting aside also the perquisites that have been accorded it. The increase of collections by adding 1½% interest per month to a bill of an honest patient embarrassed because of inflationary trends, or the bill of some retired person living on a small pension is, in the opinion of the Judicial Council, not justifiable. It simply is not worth it from any point of view. The imposition of a penalty on the bill of a "deadbeat" is not likely to cause him suddenly to change; the chances are he will become even less likely to pay.

A physician who demands a satisfactory credit report on an individual before accepting that individual as a patient is demonstrating that to him financial compensation is the prime object and reward of his profession.

A physician who publicly refuses to see a patient, who had an appointment, because patient's balance on account was "too high" is demonstrating that he respects neither himself nor his profession.

These examples are real. The Council believes they are the exception and they seem more conspicuous because of that fact. Nonetheless, these practices reflect adversely on the whole profession and especially on the countless physicians who extend credit willingly or write off old accounts because they are dedicated to serving mankind.

The Judicial Council therefore recommends

that the House of Delegates reaffirm that the prime object of the medical profession is to render service to humanity; financial gain is a subordinate consideration.

The Council recommends that the House call this reaffirmation of policy to the attention of constituent and component medical societies, asking them to urge all physicians to adhere faithfully to the professional ideals, traditions and goals of American medicine.

PERSONAL AND NEWS ITEMS

Dr. Jansen On AMA Section Council For Dermatology

Dr. G. Thomas Jansen, Little Rock, has been named as an officer of the Section on Dermatology's representatives on the new AMA Section Council. He is the assistant representative for the program.

The new organizational structure, effective January 1, 1972, has been established to provide medical specialty associations with a direct role in AMA policy-making decisions and Section program development.

Dr. Long and Dr. Norton Reappointed By AMA Board

Drs. C. C. Long, Ozark, and Joseph A. Norton, Little Rock, were reappointed by the Board of Trustees of the American Medical Association to the Council on Rural Health and the Committee on Medicine and Religion, respectively. Dr. Long's term extends through 1979, while Dr. Norton's tenure expires at the close of 1973.

University of Arkansas Radiologists' Exhibit Double Winner of National Awards

A scientific exhibit designed principally to teach medical students the anatomy of the lumbar vertebra, devised by the staff of the Department of Radiology at the University of Arkansas Medical Center, received the second highest award among ninety-seven exhibits displayed at the meeting of the Radiological Society of North America. The exhibit had previously been awarded third place at the American Roentgen Ray Society. The instructional technique was devised by Dr. Howard J. Barnhard, professor and department chairman, and Dr. Doyne Dodd, Jr., assistant professor, with the assistance of Jack Rush, a radiologic technologist.

Dr. Gardner Named Diplomate

Dr. Joe A. Gardner, of the staff at the Millard-Henry Clinic in Russellville, was recently named a diplomate of the American Board of Obstetrics and Gynecology.

Dr. R. A. Etherington Announces New Associate

Dr. R. A. Etherington, Eureka Springs, announces the recent association with him of Dr. Lloyd Smith Rolufs for the general practice of medicine and surgery. Their offices are at the Eureka Clinic, 41 Kingshighway.

Sebastian County Medical Assistants Install 1971 Officers

1971 Sebastian County Medical Assistants Society officers took office at the organization's annual installation dinner. Installed by Dr. Taylor Prewitt of Fort Smith were: president, Mrs. Cookie Sadler; vice president, Mrs. Elizabeth Doss; and treasurer, Mrs. Betty Doty.

Blood Collected in UALR Drive

Fifty dollar scholarships were awarded to an individual donor and a fraternity during a drawing by Dr. James Smith, president of the Pulaski County Medical Society, which concluded the blood drive held at the University of Arkansas at Little Rock. The drive was sponsored by the Pulaski County Medical Society, the Pulaski County Red Cross and the Student Health Service.

Dr. Saltzman to Head State Cancer Society and Also Receives Appointment to National Health Services Council

Dr. Ben N. Saltzman, Mountain Home, was elected president of the Arkansas Division of the American Cancer Society at its recent annual meeting held in Little Rock. He has been a board member of the Arkansas Division for the past twenty years. Dr. Saltzman also received a three-year appointment to the National Advisory Health Services Council by Dr. Paul J. Sanazaro, director of the National Center for Health Services Research and Development. The Council is an advisory board to the Health Services and Mental Health Administration of the Department of Health, Education and Welfare.

El Dorado Physician and Family Injured in Four Car Collision

El Dorado physician, Reuben C. Setliff, his wife, and their children were injured in a mid-December four car collision in El Dorado. All four were released from Union Mercy Hospital after treatment and it is hoped that all have made complete recoveries as this account is published. Police investigation resulted in the citation of a driver of one of the other vehicles for running a red light, which set off the series of collisions.

Dr. Wilson Re-elected by Academy

Dr. Joe Bill Wilson of Harrison has been re-elected to active membership in the American Academy of General Practice.

Drugs Stolen From Little Rock Physician

A quantity of drugs were stolen in mid-December from the offices of Dr. Ralph A. Downs at 5512 West Markham, Little Rock. A lock was broken by the burglar(s) in gaining entry, according to the city's police.

1971 Boone County Hospital Medical Staff Elected

1971 medical staff officers for Boone County Hospital have been elected as follows: chief of staff, Dr. Tom Bell; vice chief of staff, Dr. David Martin; secretary-treasurer, Dr. Mahlon Maris, and liaison staff officer, Dr. Rhys Williams.

Lincoln County First in 1971, Drew County Holds Second With Dallas County Close Third

The Lincoln County Medical Society has distinguished itself as the first county society in 1971 to submit the dues of its membership to the Arkansas Medical Society's headquarters for receipt and certification for the current year. Dr. James Freeland and Dr. Richard Petty serve as president and secretary of the county society, respectively. Both reside in Star City.

Drew and Dallas County Medical Societies were close upon the Lincoln County Society's heels as the second and third earliest dues remitters, respectively. Drew County's president and secretary are, in order, Dr. Paul A. Wallick and Dr. A. K. Busby, both of Monticello. Dr. Jack Dobson serves as president and Dr. John H. Delamore as secretary for Dallas County.

Dr. Kutait Given Plaque of Appreciation

Dr. Kemal Kutait was honored in late December with a plaque of recognition and appreciation for his dedication and service as chief of staff in 1970 by St. Edward Mercy Hospital of Fort Smith.

University of Arkansas Medical Center Faculty Member Receives Car For Twenty Year Service

Dr. William G. Reese, head of the Department of Psychiatry at the University of Arkansas Medical Center, recently got more than he bargained for when called upon to come to an auditorium in the Medical Center "to settle an argument between colleagues."

Led into the darkened room, Dr. Reese was surprised, when the lights were brought up, to discover his fellow physicians in the audience to watch him be presented with a new Toyota automobile, a gift in appreciation of his twenty years of service from former students and medical workers at the Center.

1971 Crittenden Memorial Hospital Staff Elected

Crittenden Memorial Hospital of West Memphis has announced its staff officers for 1971 as follows: Chief of Staff, Dr. John M. Wilson; Vice Chief of Staff, Dr. Lee Winters; and Secretary, Dr. Chester Peeples.

White County Memorial Hospital Names 1971 Staff

The following have been elected officers for the staff of the White County Memorial Hospital in Searcy: Chief of Staff, Dr. Jack Gardner, and Vice Chief of Staff, Dr. David Johnson.

Memorial Hospital of North Little Rock Announces 1971 Staff Officers

North Little Rock's Memorial Hospital medical staff officers for 1971 are: Dr. Bruce E.

Schratz, chief of staff; Dr. Frank R. Ludwig, chief of surgical section; Dr. Bob L. Gosser, secretary; Dr. Joe P. Stanley, chief of medical section; Dr. Garnett J. Leonard, chief of general practice section; Dr. H. Austin Grimes, parliamentarian; and Dr. Marion M. Church, vice chief of staff and chief of the obstetrics and gynecology section.

OBITUARY

Dr. Joe Winston Reid

Dr. Joe Winston Reid died December 16, 1970, at the age of 62. He had practiced medicine in Arkadelphia since 1934.

Born in Delight in 1908, Dr. Reid was a graduate of Henderson State College in Arkadelphia and a 1934 recipient of the M.D. from the University of Arkansas School of Medicine.

A member of the Clark County and Arkansas Medical Society, and the American Medical Association, Dr. Reid served as president of his county medical society and as chief of staff of the Clark County Memorial Hospital. He was a member of the board of trustees of Henderson State College at the time of his death.

Dr. Reid is survived by his wife, Mrs. Lois Henigan Reid, and two daughters.

* * *

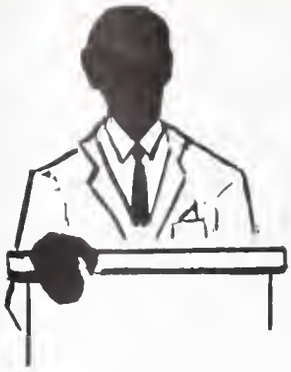
Dr. William A. Fowler

Dr. William A. Fowler of Fayetteville died January 3, 1971. He was eighty-six years old.

Born in 1884, Dr. Fowler received the M.D. in 1908 from the University of Tennessee School of Medicine. After his internship at Bellevue Hospital in New York City, he practiced in Oklahoma City before moving to Fayetteville where he practiced from 1932 until his retirement.

Dr. Fowler was a former professor of hygiene and student health director at the University of Oklahoma. He was a member of the Washington County and Arkansas Medical Societies, having served as president of his county society and vice president of the State Society.

Dr. Fowler is survived by his wife, Mrs. Virginia Tolbert Fowler, a son, and three daughters.



PROCEEDINGS OF SOCIETIES

The following officers of the Boone County Medical Society have been elected for 1971: president, Dr. Lindell M. Kinman; vice president, Dr. Mahlon Maris; secretary-treasurer, Dr. David Martin; delegate, Dr. Robert Langston; first alternate, Dr. Mahlon Maris; and second alternate, Dr. David Martin.

1971 officers of the Ouachita County Medical Society are elected as follows: president, Dr. Tom Meek; vice president, Dr. James Guthrie; secretary-treasurer, Dr. L. V. Ozment; delegate, Dr. A. E. Thorne; alternate delegate, Dr. L. V. Ozment.

State Auxiliary Holds Health Careers Workshop

A Health Careers Workshop was held in connection with the Woman's Auxiliary to the Arkansas Medical Society's mid-winter board meeting. The workshop was led by Mrs. Russell L. Deter, El Paso, Texas, who is the National Auxiliary Health Careers Chairman. The meeting was held at the Pleasant Valley Country Club in Little Rock on January 19. Auxiliary members attending were given a coffee by the Faculty Women's Club of the University of Arkansas Medical Center in the home of Mrs. Fred Caldwell prior to the board's session.

THINGS TO COME

SOUTHWESTERN SURGICAL CONGRESS MEETING DATES ANNOUNCED

The twenty-third annual meeting of the Southwestern Surgical Congress is scheduled to meet in Las Vegas, Nevada, April 19-22, 1971, at the Caesar's Palace Hotel.

* * *

THE AMERICAN COLLEGE OF OBSTETRICS AND GYNECOLOGISTS

The Nineteenth Annual Clinical Meeting of the American College of Obstetrics and Gynecologists will be held in San Francisco, May 3-6, 1971.

The program will develop three themes, Perinatology, Pelvic Infections, and Diseases of the Vulva, one each day. The general sessions, seminars, correlated seminars, round tables and reports on clinical investigations will each relate to the day's theme.

Non-fellows may register to attend both the meeting and the Postgraduate Courses which precede the meeting on May 1 and 2.

Contact: Donald F. Richardson, 79 West Monroe Street, Chicago 60603.

Effects of Cigarette Smoking on Dogs: Part I

E. C. Hammond et al (219 E 42nd St, New York 10017)

Arch Environ Health 21:740-753 (Dec) 1970

Tracheostomy was performed on 97 male beagles. All but eight (group N) were trained to smoke cigarettes over the first 56 days, through tubing from a cigarette holder to the tracheostoma. Of the 89 smoking dogs, two died and one was withdrawn during the period. On day 57, the remaining 86 dogs were divided into four groups assigned to various smoking categories, some smoking filter-tip and others nonfilter cigarettes. Starting on day 876, all surviving dogs were killed and lung sections were examined microscopically. The lungs of the group N dogs were normal while histopathological changes were found in all smoking dogs. Greatest changes were in the lungs of dogs smoking nonfilter cigarettes most heavily.

BOOK REVIEWS

SURGERY AND BIOLOGY OF WOUND REPAIR. This book is an interesting text comprising 630 pages oriented principally on explaining the care and treatment of wounds. It is well written and amply illustrated. It has a suggested reading list at the end of the major chapters. Of particular interest to this reviewer were the introductory chapters, which discussed newer information concerning inflammation and cellular response to injury, epithelial mechanisms, contraction, fibrous protein and matrix, and the biochemistry and environment of wounds.

The format of the book is divided along conventional lines and consists of chapters on skin wounds and burns, tendons, fascia and muscles, peripheral nerves, bone injuries and the healing and repair of viscera.

In general, the book is aimed at explaining skeletal repair rather than visceral injuries. The book is easy to read and interesting. It is recommended as an excellent book on trauma.

Cutaneous Interferon During Varicella and Vaccinia Infections in Patients With Malignancies

R. Armstrong et al (Stanford Univ School of Medicine, Palo Alto, Calif 94302)

New Eng J Med 283:1181-1187 (Nov 26) 1970

Thirteen of fourteen persons without malignancies produced at least 1,000 units/4 ml of vesicle fluid interferon (VF-IF) during varicella infection, ie herpes zoster or chickenpox. Three of seven patients with malignancy who developed varicella infections were leukopenic and produced les than 100 units/4 ml VF-IF. These three patients had further viral spread and two died from the infection, one of whom was treated with an interferon inducer, polyinosinic acid: polycytidylic acid, without a rise in interferon levels or clinical improvement. The other four patients were not leukopenic and had greater than 1,000 units/4 ml VF-IF when studied late in their course, and all recovered. Between 30 and 170 units/4 ml of interferon was demonstrated from crust extracts of three patients recovering from serious complications of smallpox vaccination. The ability to produce high levels of cutaneous interferon, possibly produced by white blood cells, may be important in determining the outcome of varicella infections.

MINUTES
HOUSE OF DELEGATES
November 22, 1970

The House of Delegates of the Arkansas Medical Society was called to order at 1:50 P.M. on Sunday, November 22, 1970, by the Speaker, Amail Chudy. Invocation was by C. Randolph Ellis.

The roll call of delegates was by the executive vice president, Mr. Schaefer. The following delegates, councilors, officers, and members seated as delegates were present:

ASHLEY	W. A. Regnier
BAXTER	John F. Guenthner
BENTON	John Moose
BOONE	Rhys A. Williams
CHICOT	John P. Burge
CLARK	Eli Gary
CLEBURNE	William M. Wells
CRAIGHEAD-POINSETT	Joe Verser
CRAWFORD	G. H. Ferrell, Jr.
DALLAS	Jack T. Dobson
DESHA	Howard Harris
DREW	A. K. Busby
GARLAND	M. R. Springer, Jr.
	John Trieschmann
GRANT	Curtis B. Clark
GREENE-CLAY	Asa A. Crow
HEMPSTEAD	Jim McKenzie
HOT SPRING	Robert H. White
JEFFERSON	R. Teryl Brooks
	Ross Maynard
LEE	Dwight W. Gray
LOGAN	W. Duane Jones
MISSISSIPPI	J. E. Beasley
NEVADA	H. Blake Crow
POLK	John P. Wood
POPE-YELL	Charles F. Wilkins, Jr.
	Roy I. Millard
OFFICERS	President Jack W. Kennedy
	President-elect Stanley Applegate
	First Vice President Wright Hawkins
	Speaker Amail Chudy
	Secretary Elvin Shuffield
	Treasurer Ben N. Saltzman
PAST PRESIDENTS	L. A. Whittaker
	C. Randolph Ellis
	Joe Verser
	C. Lewis Hyatt
	H. W. Thomas
	Ross Fowler
PULASKI	James L. Smith
	Frank Padberg
	Winston K. Shorey
	Fred O. Henker, III
	Robert Watson
	Edgar J. Easley
	John McC. Smith
	Curry B. Bradburn, Jr.
	G. Thomas Jansen
	Charles W. Logan
	C. G. Massey
	John C. Schultz
SEBASTIAN	Carl Williams
	Annette Landrum
	L. A. Whittaker
	Harley Darnall
	Kemal Kutait
	A. C. Bradford
UNION	George C. Burton
	Paul G. Henley
WASHINGTON	Morriss M. Henry
	Lee B. Parker, Jr.
	Robert A. Etherington
COUNCILORS	Eldon Fairley
	Paul Gray
	Dwight W. Gray
	L. J. Pat Bell
	Raymond Irwin
	Wayne Lazenby
	Kenneth R. Duzan
	George F. Wynne
	Karlton H. Kemp
	C. Lynn Harris
	James C. Bethel
	W. Payton Kolb
	William S. Orr
	Morriss Henry
	Henry V. Kirby
	C. C. Long

The House transacted business as follows:

1. Speaker Chudy called on the Society President, Jack Kennedy, who made brief remarks concerning legislation now before Congress and discussed the various programs of the State Society.

2. Speaker Chudy reviewed the action of the Council at its August meeting when tentative approval was given to changes in the tuberculosis control program as proposed by the Communicable Disease Division of the State Health Department. The proposal was for:

(1) All tuberculosis control under one agency;
(2) Chest clinics in the 14 counties which have no chest clinics;
(3) Local hospitals in each section of the State where tuberculosis can be treated providing a happy atmosphere and the same cooperation between doctors, nurses, and patients that has been exhibited in the Pine Bluff Project;
(4) Emphasis on the use of preventative treatment.

Raymond Irwin of Jefferson County moved that the proposed changes be approved. Edgar Easley of Pulaski County made the second to the motion.

Carl Williams of Sebastian County briefly discussed the proposal and moved that the proposal be tabled. Second to this motion was by Duane Jones of Logan County. The motion to table was defeated.

The House then continued discussion on the original motion by Dr. Irwin. During subsequent discussion, it was pointed out that approval would mean eventual phasing out of the State Sanatorium and it was reported that legislation was being drafted which would abolish the Board of Trustees of the Sanatorium and transfer the authority of that group to the State Health Department. By standing vote, the proposal was approved with 36 voting for the proposal and 28 voting against it.

3. Upon the motion of William S. Orr and W. Payton Kolb, both of Pulaski County, the House voted to support legislation to be sponsored by the State Police Department regarding medical examination of applicants for a driver's license. The proposal calls for local licensing authorities to screen applicants for determination of need for medical evaluation. A medical advisory board would be created to assist the licensing authorities in making determination of fitness for a driver's license.

4. Speaker Chudy presented a resolution from the Washington County Medical Society pertaining to development of a new professional entity—Registered Physician Assistant. Spencer Albright of Washington County spoke briefly urging the Society to take the initiative in development of the entity in Arkansas to make certain that physician assistants are kept under the control of the State Medical Board and not allowed to become independent practitioners under the supervision of a lay board.

Mr. Warren reported that the Legislative Committee had considered the resolution and that he had drafted a proposed amendment to the Medical Practice Act which would accomplish the purpose of the resolution and leave the entire control of the physician assistants in the hands of physicians. The proposed amendment was:

> "Nothing in this Act shall be construed as to prohibit service rendered by the physician's trained assistant, a registered nurse, or a licensed practical nurse, if such service be rendered under the direct supervision and control of a licensed physician."

Upon the motion of Winston Shorey of Pulaski County and George F. Wynne of Bradley County, the House voted approval of Mr. Warren's proposed amendment to the Medical Practice Act.

After lengthy discussion concerning the training, duties, limitations, and position of malpractice insurors concerning physician assistants, Wilbur Lawson, Washington County, moved that the resolution be placed on the agenda for the meetings of the House of Delegates at the 1971 Annual Session for referral to a proper reference committee for further consideration. Upon second by Lee Parker of Washington County, the House so voted.

5. The president of the Arkansas Society of Pathologists, Nils Pehrson of Little Rock, presented a proposed act for licensure of clinical laboratory personnel. The Council had previously considered the proposal and referred it to the Legislative Committee. Legislative counsel had recommended amending the original proposal so that the act would be placed under the State Medical Board and that there be an exemption to persons performing diagnostic procedures under the direct supervision of a physician.

Upon the motion of Etherington and Williams, the House voted to request that Section 9

of the proposed act be amended to specifically exclude medical assistants engaged in clinical laboratory procedures under the direction and supervision of a physician.

Upon the motion of Payton Kolb and Shuffield, the House voted to request that section 15 of the proposed act be amended to change "declared insane" to "declared incompetent" as a cause for refusal to register or revoke registration of registered persons.

The House voted approval of the proposed legislation with amendments set out above.

6. Speaker Chudy called on Elvin Shuffield, chairman of the Legislative Committee, for a report from his committee. Dr. Shuffield gave recognition to Mr. Warren for his work as legislative counsel. Dr. Shuffield also introduced a member of the House who will become a member of the State Senate in January—Morriss Henry of Washington County.

7. Dr. Shuffield reported as follows on recommendations of the Legislative Committee:

(1) Subpoena Power for State Medical Board

Dr. Shuffield reported that the State Medical Board is in great need of legislation to give the Board subpoena power. The Legislative Committee recommended House of Delegates approval of legislation for this purpose. The House gave unanimous approval to the proposal.

(2) Foreign Medical Graduates

Upon the motion of Verser and Weber, the House voted to approve a proposal for amending the Medical Practice Act to allow qualified foreign medical school graduates to practice medicine in Arkansas. The plan is to include requirements for American experience or education prior to receiving a license.

(3) State Medical Examiner

Upon the motion of Shuffield and Fowler, the House voted to go on record in support of a budget appropriation for the State Medical Examiner.

(4) Professional Corporation Act

Upon the motion of Shuffield and Kolb, the House voted to approve a proposed amendment to the Professional Corporation Act to provide for incorporation by an individual practitioner.

(5) State Tax Status on Contributions to Retirement Programs

Upon the motion of Shuffield and Wynne, the House voted to work for amendment of State laws to gain the same tax advantage on the State level as on the Federal level for Professional Corporation contributions to their retirement programs.

(6) State Medical Board

Upon the motion of Shuffield and Fowler, the House voted to oppose any proposed legislation to consolidate the State Medical Board with other State boards.

(7) Healing Arts Board

Upon the motion of Shuffield and Verser, the House voted to oppose any proposed legislation to consolidate the State Medical Board with other State boards.

(8) Optometry Meeting

The Legislative Committee recommended that Mr. Warren attend an optometry meeting in December but take no action. Upon motion of Shuffield and Verser, the House voted approval.

(9) Psychiatric Care Coverage in Insurance Policies

Upon the motion of Shuffield and Kolb, the House voted to work with the Insurance Commissioner and/or the Legislature on getting clarification in insurance policies regarding coverage for psychiatric care.

(10) Chiropractic

Upon the motion of Shuffield and Verser, the House voted to oppose legislation by chiropractors to force insurance companies to pay for their treatment.

(11) Certified Nurse Anesthetists

Upon the motion of Shuffield and Fowler, the House endorsed legislation to be proposed by the Certified Nurse Anesthetists providing for direct payment for their services under government medical programs.

(12) Implied Consent Law

The House voted to endorse efforts by the State Police to get amendments to the Implied Consent Law to eliminate some apparent loopholes. It is proposed that the law also be extended beyond drunkenness to include drugs.

(13) Nursing Board

Dr. Shuffield also reported that the Licensed Practical Nurses were going to introduce legislation to remove them from the Registered Nurses Board. No action by the Society was requested.

The House of Delegates gave Dr. Shuffield a standing ovation for all his work on behalf of the medical profession.

The House of Delegates adjourned at 3:30 P.M.

Amail Chudy, M.D.
Speaker, House of Delegates

TUBERCULOSIS ABSTRACTS

Sponsored by Arkansas Tuberculosis and Respiratory Disease Association

PULMONARY SARCOIDOSIS: A PROSPECTIVE EVALUATION OF GLUCOCORTICOID THERAPY

Data in this first controlled prospective study on the therapeutic effects of glucocorticoids on pulmonary dysfunction in sarcoidosis failed to yield any significant evidence that this therapy produces beneficial change in pulmonary function.

The efficacy of glucocorticoid therapy in the treatment of pulmonary dysfunction in sarcoidosis is still questionable despite numerous reports detailing its use.

It has been suggested that to be effective adrenal corticoids should be given early on the theory that, if administered during the acute phase of illness, they may reduce inflammatory reaction and thereby prevent or, at least, curtail fibrosis.

Although amelioration of symptoms and improvement in chest roengtenographic abnormalities have been confirmed, pulmonary functional changes have been variable. However, previous studies of pulmonary function have been retrospective and often lacked suitable controls.

PROSPECTIVE CONTROLLED STUDY

The present study of 25 patients with proven sarcoidosis and pulmonary dysfunction was undertaken four years ago to pursue a prospective controlled investigation—with the results available at one to two years—on the effects of glucocorticoid therapy on pulmonary function in early sarcoidosis.

The average age of the 20 males and five females in the study was 26. Duration of illness was determined to be less than one year for 21, less than two years for three, and less than three years for one.

The diagnosis of sarcoidosis was based on the presence of noncaseating granulomas in either lung, lymph node, or Kveim test biopsy, together with clinical characteristics of sarcoidosis and the exclusion of other diseases. Fifteen patients had noncaseating granulomas shown on one biopsy (10, lung and five, scalene node). In the remaining 10, noncaseating granulomas were found at two more sites.

PULMONARY DYSFUNCTION

The only significant pulmonary function abnormalities found were a decreased lung diffusion capacity (D_{LCO}), abnormal, arterial oxygen tension (Pa_{O_2}), decreased total lung capacity (TLC), and/or forced vital capacity (FVC).

Criteria for inclusion in the study were an abnormal D_{LCO} ($D_{LCO} > 2$ standard deviations (S.D.) beyond normal) an arterial P_{O_2} of less than 80 mm Hg at rest or after exercise. (Ten patients on glucocorticoid therapy with normal function studies were followed serially but not considered for the treatment protocol.)

Presence of any concomitant disease that could affect pulmonary function excluded a patient from the protocol as did previous glucocorticoid therapy.

Patients meeting the study criteria were assigned to a control or treatment group on an alternate basis: 12 patients to the control group and 13 to the treatment group.

Treatment consisted of 15 mg prednisone four times a day for one month and five mg four times a day for at least an additional five months. Isoniazed chemoprophylaxis was not given. To date no patient in the treatment protocol has developed tuberculosis.

All patients were evaluated between one and two years after entering the protocol. In addition, 19 were evaluated at six months after entering the study; seven, at one to two months. There was no significant change in the pulmonary function studies at one to two months, six months, or at the end of one to two years in either group.

Lt. Col. Robert L. Young, USAF, MC, F.A.C.P.; Maj. Lionel E. Harkleroad, USAF, BSC; Maj. Robert E. Lordon, USAF, MC, and John G. Weg, M.D., F.A.C.P., *Annals of Internal Medicine*, August 1970 (Vol. 73, No. 2).

STUDY RESULTS

Prospective alternate-case treatment of patients with sarcoidosis showed no beneficial effect of prednisone on the pulmonary function abnormalities studied. Although the group studied was not large, the treated and untreated patients were initially similar in every value measured. They had disease of relatively short duration and showed predominantly inflammatory changes on percutaneous needle lung biopsy. Thus, theoretically, they were the best possible candidates for steroid therapy. The dose of prednisone used was high enough and of sufficient duration to cause facial changes consistent with Cushing's syndrome in every patient. In general, the pulmonary function values remained stable in both the treated and untreated groups.

Although an occasional favorable response was noted, it was either so slight or occurred so infrequently that it did not affect the overall results in the treated group when compared with the untreated control group. Individual evaluation of each case did not show any dramatic improvement in a treated patient which was not matched by similar changes in an untreated patient; nor was any deterioration of pulmonary function observed when glucocorticoid therapy was discontinued.

One treated patient who maintained a relatively stable course for six months deteriorated progressively thereafter in spite of continued prednisone therapy. Previous reports of such deterioration after gluococorticoid therapy has been discontinued may have represented the natural course of the disease and not an effect from the steroids.

In earlier studies of small numbers of patients whose pulmonary function was evaluated, only the "sickest" patients generally were treated with steroids. Beneficial effects from this therapy have been confined largely to changes in vital capacity or involved a single case, and/or studies have been retrospective or with very brief follow-up.

In the present series, the patients with the more severe functional abnormalities were not found to be any more responsive to therapy than those with milder defects. Moreover, improvement in some control patients was comparable to that of patients who improved while taking glucocorticoids.

The combined experience from the literature indicates that when glucocorticoids are given to severely ill patients symptomatic and roentgenographic improvement may occur; the number of such patients in the persent study and in any series.

It should be noted that the information in this study does not pertain to the treatment of extrapulmonary sarcoidosis. The major objective of this study was to define the effect of adequate glucocorticoid therapy on pulmonary function in patients with "early" sarcoidosis.

If steroids are to be used in treating pulmonary sarcoidosis it should be with the realization that, while symptoms and chest roentgenograms may improve, significant permanent improvement in pulmonary function or alteration in the ultimate course of the disease by early steroid therapy has not been documented.

Complement Activation After Milk Feeding in Children With Cow's Milk Allergy

T. S. Matthews and J. F. Soothill (30 Guilford St, London)

Lancet 2:893-895 (Oct 31) 1970

Of eight patients with allergy to cow's milk protein, established by the usual clinical criteria, five whose symptoms were largely intestinal had evidence of complement activation after challenge feeding with 5 ml of milk. A control group of nonallergic children on milk-free diets did not show this effect. In three patients with a history of urticaria and striking cutaneous hypersensitivity to milk, challenge feeding with 0.2 ml of milk was followed by "immediate"-type symptoms. The detection of complement activation after milk feeding confirms the involvement of immunological mechanisms in some patients diagnosed as having cow's milk allergy, indicates that more than one immunopathogenic mechanism may operate in these patients, and provides a test of diagnostic value.

OPPORTUNITIES TO PRACTICE MEDICINE IN ARKANSAS

ATKINS. Population 2,000. Opportunity for association with young general practitioner. Modern clinic; no initial expense; guaranteed income.

CLARKSVILLE. Population 4,000. Good opportunity for general practitioner. Progressive college town; municipally-owned hospital.

FAYETTEVILLE. Office space available; new building across from city hospital. Adequate parking. Good opportunity for practice in ENT, Geriatrics or as general practitioner.

FORT SMITH. Associate wanted by two general practitioners. Population about 70,000. Busy office and hospital practice. $20,000-$25,000 salary first year with increasing percentage until full partnership.

FORT SMITH. Clinic openings in three specialties: Internal Medicine, Urology, and Orthopedics. Present staff includes 3 surgeons, 3 internists, 1 dermatologist, and consulting radiologists.

MAGAZINE. Population 625, trade area about 2,500. Community without physician; near Booneville — area getting new industry.

RUSSELLVILLE. Population 14,000. General Practitioner to practice in a group. Eight physicians now on the staff. Salary first year and then percentage of gross.

CALICO ROCK. Population about 800. Opportunity for association with general practitioner — either GP or internist. Salary at first, with increasing percentage until full partnership.

COTTON PLANT. Population 1,800. Town without a physician. Doctor Committee and Jaycees heading a drive to obtain physician and build suitable clinic.

HUGHES. Population 2,000. Modern, completely equipped clinic available. One physician in practice in town; large trade area.

JONESBORO. Population 24,000. Associate wanted by young general practitioner. Excellent opportunity. College town with good hospital.

For additional details on these and other locations, please contact:

PHYSICIAN PLACEMENT SERVICE, ARKANSAS MEDICAL SOCIETY

Post Office Box 1208 Fort Smith, Arkansas 72901

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THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

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FORT SMITH, ARKANSAS

95th ANNUAL SESSION
ARKANSAS MEDICAL SOCIETY
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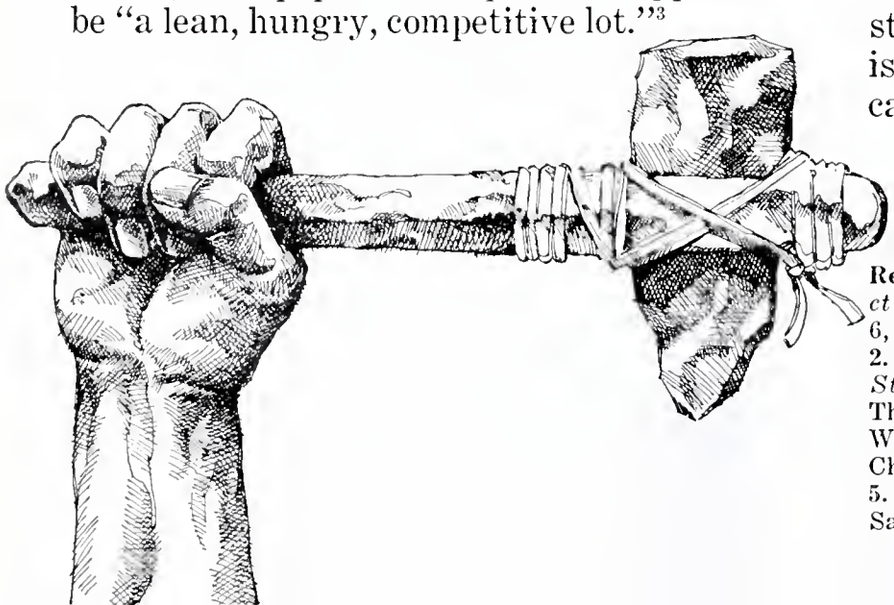
IF MORE MEN CRIED

At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



Big boys don't cry. If more men crie maybe fewer would wind up with duoden ulcers. But men will be men—the sum total their genes and what th are taught. Schottstae observes that when mother admonishes h son who has hurt himse that big boys don't cry, s is teaching hi stoicism.[4] Crying is t negation of everythi society thinks of as man A boy starts defending h manhood at an early ag

Take away stre you can take away sympton

There is no question that stress plays role in the etiology of duodenal ulce Alvarez[5] observes that many a man with ulcer loses his symptoms the day he shuts the office and starts out on a vacation. T problem is, the type of man likely to have ulcer is the type least likely to take lo vacations or take it easy at work.

The rest cure vs. the two-way action Librax.® For most patients, the rest cure as unrealistic as it is desirable. Still, t stress factor must be dealt with. And he is where the dual action of adjunctive Libr can help. Librax is the only drug that co

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. *et al.* (eds.): *Harrison's Principles of Internal Medicine*, 6, New York, McGraw-Hill Book Company, 1970, p. 14 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wol Stress and Disease*, ed. 2, Springfield, Ill., Charles Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottstae W. W.: *Psychophysiologic Approach in Medical Pract* Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 1 5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W. Saunders Company, 1951, p. 384.

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Ocular Sequalae Following Air-Blast Injury

Yum Y. King, M.D.**

Head trauma, particularly that involving orbital fractures, may lead to optic nerve injury. In the case reported, a blast of air from an air hose at a gasoline service station directed at the eye of a child resulted in optic nerve atrophy. The mode of air-blast induced injury to the eye and the path traveled by the air to other parts of the body is described.

Case Report

A 6-year old Negro male was accidently hit in the right eye by a blast of air from a high pressure air hose. His face immediately became swollen but the health of the child was not otherwise altered. Vital signs on admission were blood pressure 100/70, pulse 120/minute, respiration 24/minute. Physical examination at the time revealed a massive subcutaneous emphysema of the entire face soon after the injury. The right eye could not be opened and the left eye appeared to be normal. Auscultation of the lung revealed harsh crackling sounds over the area of the heart which were interpreted as mediastinal crunch.

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Roentgenograms indicated a subcutaneous emphysema in the right supraclavicular area and pneumomediastinium (fig. 3 and 4) and also in the subarachnoid space posterior to the dorsum sella at the area of the optic chiasm (Fig. 5). By the 3rd day air was absent from the chest and face and air had left the intracranial and intraorbital region by 5 days after the blast-injury.

The child was started on prophylactic antibiotics on the day of injury and at this time the left eye was normal in appearance. The right eye was examined beginning 3 days after injury at which time a small conjunctival tear in the medial canthus was found. Ptosis and mydriasis developed by the 6th day and the optic disc pallor was present on the 9th day. There was no light perception in this eye and ptosis was present during the 3 year observation period. The right eye reacted to only consensual light while the left eye reacted only to direct light.

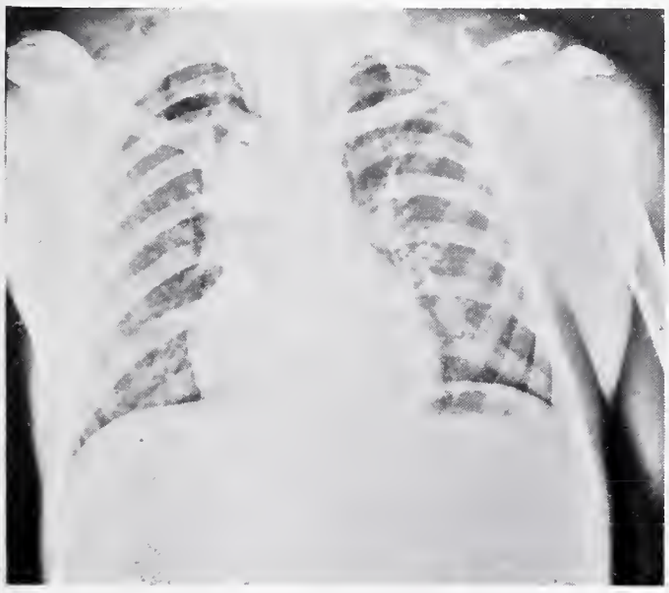

Figure 1
Subcutaneous emphysema is present in the right supraclavicular area. Air is noted extending from the left cardiac margin to above the aortic knob and into the basilar neck beneath the mediastinal reflection.

Figure 2
Pneumomediastinium is well demonstrated in lateral view.

Comments

There appear to be no previous reports of air-blast ocular injury of this type. Yet this case resulted from a common source of air blast from the air hose (125-175 lbs./sq. in.) of a gasoline service station. The air apparently perforated the conjunctiva and dissecting along the lining of the optic nerve, down the sheath of the carotid artery into the mediastinum. Alternatively, the pneumomediastinum could result from a dissecting along the cervical neck planes into the mediastinal area. The cause of the optic nerve atrophy was not evident, however, air compression or even optic nerve transection could have occurred. This case demonstrates the possible danger of common source of air blast.

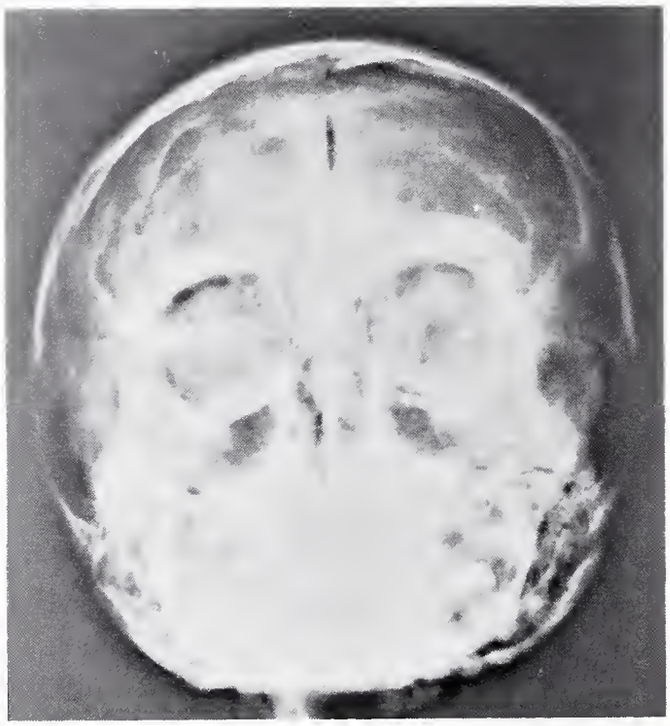

Figure 3
Air is noted in the right intraorbital area and in the intercerebral fissure.

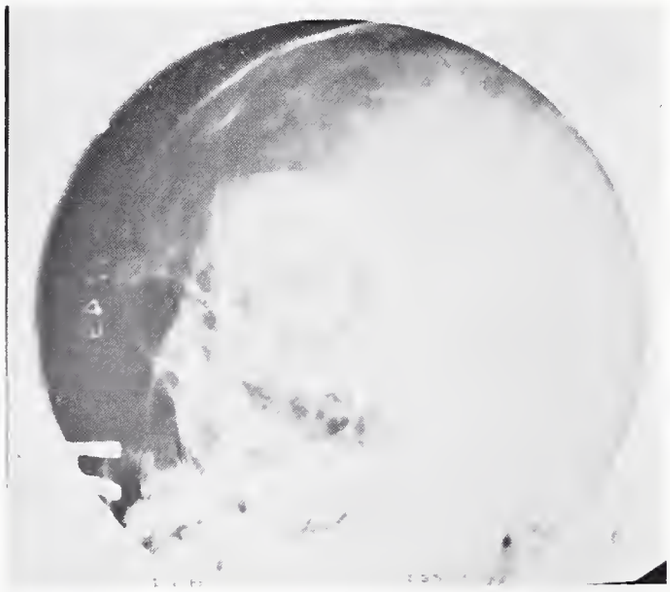

Figure 4
Circumferential lucency surrounds the right globe representing intraorbital air.

Acknowledgments

This investigation was supported in part by NIH Training Grant EY-0059.

Key Words

Optic nerve athrophy; traumatic ptosis; compressed air; gasoline service station.

Figure 5
Air is shown in the subarachnoid space posterior to the dorsum sella at the area of the optic chiasm.

Effect of Sympathectomy on the Severely Traumatized Artery

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Arch Surg 101:704-707 (Dec) 1970

Improvement was noted in peripheral pulses and limb warmth following sympathetic blocks after reconstructive surgery for vascular trauma in Vietnam. Experimental evaluation included first confirming that lumbar sympathectomy would approximately double iliac artery blood flow in dogs. Secondly, gunshot wound transection of the iliac artery followed by reconstruction resulted in decreased iliac artery blood flow for at least three hours. Finally, gunshot transection and reconstruction with immediate lumbar sympathectomy approximately doubled flows across the injured segment within 60 minutes. This work suggests that sympathetic blocks may improve flow across reconstructed traumatized arteries and enhance patency of the repair.

Health Care for the Disadvantaged in the Rural Area*

Ben N. Saltzman, M.D.**

Poverty may be caused by many things. In the individual it may be the result of a lack of resources, ability or personal development. In the community it may be the result of absent natural resources, the withdrawal of a major industry or the underdevelopment of possible resources. Whatever the cause, "the poor are always with us".

The poor are the families of low income and disadvantaged scattered among the rest of society. They sometimes make up whole neighborhoods. Frequently they make up entire communities. These communities are more often found in the rural sections of our country. In metropolitan areas, one of every eight persons is classified as poor. In rural areas, one of every four residents lives in poverty. These add up to about 14 million people or 3.5 million families. Although only 30% of our population is rural, 40% of our poor come from rural America. Three fourths of our rural poor live in towns and villages. Only one fourth live on farms. Eleven million of the 14 million are white. However, among the non-whites a much higher proportion are poor. The heaviest concentration of rural poor are in the South and on Indian reservations. This presents a picture of the problem I am about to discuss. There will be no more statistics.

In dealing with the disadvantaged it is well to keep in mind that these are people governed by a basic life style; the result of deprived, alienated living. They are fatalistic. They live only in the present. They live by their own rules. They believe only in what they can see or understand. They cannot and will not deal in abstractions. Many do not want to "be helped" especially by outsiders. To them, help means change, and they fear change. Recently, at a Menninger Clinic seminar, I heard Dr. Herbert Klemme say, "despite the reality of gains, rewards and joys that can be brought about by change, most change is also experienced as a loss, a severance from a previous source of gratifications." Change hurts. These people feel that they cannot afford to lose any more. Ben Franklin once said, "Poverty often deprives a man of all spirit and virtue; it is hard for an empty bag to stand upright."

It has long been known that poverty causes disease. Death rates and illness have always been highest among low income groups. At the same time it has also been known that disease can cause poverty. It is believed, and probably rightly so, that this applies to rural areas more than to urban areas because the resources for preventing and treating illness are less well developed in the rural areas. Our modern social policy demands that we provide scientific and humane medical service to cope with disease. In discussing rural poverty it then becomes necessary to examine both health needs and health services.

The National Advisory Commission on Rural Poverty is deeply concerned with the evidence of disease and lack of health care in rural America. It feels that nowhere in the United States is the need for health service so acute and so inadequate. The Commission has found that infant and maternal deaths are startlingly high especially among the non-white; that rural residents suffer more from chronic disabling conditions; that they have higher injury rates and lose more work days due to injury and illness; and that they have higher accident death rates than urban residents. Disability is greater because the rural poor do not have easy access to appropriate health services early in illness. Children suffer most from the lack of adequate health insurance. The Commission stresses the scarcity of health manpower and facilities. It does not believe that this shortage can soon be remedied.

Dr. Milton Roemer, professor of Public Health in California points out that in the rural areas of America, the supply of doctors and other health workers is much lower than in the cities. The specialization of medicine has increased the tendency for physicians to practice in urban centers. Rural physicians are mainly general practitioners. Despite our improved roads and transportation facilities in recent years, transportation to distant cities for health care is not accessible to low income people in rural districts.

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The rural physician is usually isolated and lacks the time and stimulation necessary to keep up with the endless advances in medical science. Noble efforts are being made to bring this man back into the mainstream of medicine, but the job seems hopeless at times. Just a few weeks ago I subjected myself to an ordeal involving participation in two days of examination for board accreditation in Family Practice. Judging from the stricken faces of some of my colleagues, I was impressed with the fact that I wasn't the only one who had "bitten off more than he could chew". In fact, I heard one physican exclaim as he left the examinaiton hall, "My God, I don't know how my patients survived!!"

There are other shortages in rural areas that come to mind. Nurse supply is markedly inadequate. Hospital beds are available, but staffing is inadequate. There are very few organized outpatient clincs in general hospitals for the indigent and medically indigent patient. Emergency rooms are inadequately equipped, staffed and maintained. Nursing homes in rural areas are generally poorly run and poorly staffed. Yet the rural indigent have no place else to go. Senile and psychotic patents must usually go to seriously substandard mental hospitals. This is particularly unfortunate for the poor, since mentally disturbed patients of lower social classes are more likely to be handled through institutionalization than persons of better economic status with the same ailments.

As I mentioned earlier, poverty breeds poor health. The lower educational level of the rural poor means that they are less likely to observe principals of hygienic living. They are less likely to obtain preventive immunizations, to have prenatal care during pregnancy, to eat a nutritionally balanced diet and to obtain health examinations for early disease detection.

Public Health programs in addition to the traditional services including supervision of environmental sanitation, control of communicable disease, promotion of maternal and child health and health education have broadened their activity range to include dental service for children, accident prevention, treatment for crippled children, mental health promotion, early detection of cancer and diabetes and administration of some public hospitals. However, low salary scales and unimaginative planning have resulted in serious manpower shortages in the field of public health over the country, with resultant curtailment of activities.

Welfare medical services have played an important part in the health care picture for the rural poor. In general, the proportion of persons receiving some form of public assistance is higher in the low income states with greater percentages of rural population. However, the financial as well as the medical benefits per indigent person tend to be lower in the more rural states.

Voluntary health insurance programs have been of little value to the rural poor. They cannot pay the insurance premiums whether in groups or outside groups. They cannot participate in the fringe benefits available to employed groups.

The Medicare law has been generally of value to the rural poor above the age of 65 years. However, due probably to difficulties in communication with isolated and poorly educated persons, many have not participated in the part B benefits, which they can use the most.

Title XIX can be of benefit to some rural poor but the range of services will be narrower in the more rural states because of the requirement for matching state funds.

Other programs available include the Indian Service and Federal assistance for health services to migrant workers and their families. There is also Federal assistance for the rural poor of the Appalachian mountain region. However, these special programs reach only a small proportion of the rural poor in the nation.

This in brief has been a summary of the health problems and health services available to the rural disadvantaged of this country. In my own area and in my state of Arkansas, I have watched continual improvement in the health care of our people. Except for the health services provided by public health and the Veteran's Administration, most of the care has been provided by the private sector of medical practice. There are areas where quality medical care is not being received, but in most instances the problem has been that medical care has not been sought. It is my firm belief that before any system of health care can become effective it will first be necessary to educate people to know what good health is, to want good health care and to actively seek it.

The National Advisory Commission has made the following recommendations:

Health manpower—both professional and subprofessional—should be rapidly expanded.

A National Rural Health Corps should be established to work in rural areas with health needs.

The Federal Government should encourage and promote group health practices in rural areas, and assist in establishing facilities to be used for this purpose.

High quality home care programs should be developed to serve the elderly and chronically ill in rural areas.

Community health centers tied into a regional system of hospital services should be developed to focus on the health needs of rural persons. In isolated rural areas these centers could take the form of mobile units.

A National Program of comprehensive dental care for children should be developed with special provisions to meet the needs of poor in rural areas.

Modern techniques of communication and transportation should be effectively used to serve isolated rural areas and to bring the rural physician in close association with regional hospital centers.

The Council on Rural Health of the American Medical Association is pretty much in agreement with the recommendations of the Commission. In addition, the Council has the following recommendations to offer: Based on a recent survey entitled "Medical Practice in Small and Large Communities", it was found that 49% of the physicians practicing in town under 2,500 were reared in a small town. Hence the Council believes that medical schools should, in their admission policies for new students, give special consideration to applicants with rural backgrounds. There is urgent need for increased emphasis and further development of community medicine and the health team concept in the medical school curricula. Rural preceptorships with meaningful medical school support will add a whole breadth of experience to the medical student and allow him to make a more informed choice of medical career after graduation. Community colleges should be encouraged to develop a wide variety of training courses for health professionals. They should be sensitive to the needs of the community and meet them by training appropriate nurses and technicians. Young people trained at the local level will be more likely to serve in the locale in which the training is given. This will serve to:

1. Insure adequacy of supply of health professionals.
2. Increase the likelihood of health professionals remaining in the smaller communities; and
3. Insure greater elasticity of program to meet local needs.

The rural poor should be given opportunity for upward mobility in the health field.

The rural economically disadvantaged has special problems of low priority for health services, distance from health services compounded by their immobility, and cultural barriers to the acceptance of health services. For these and all people living in sparsely populated isolated areas, it becomes essential that a variety of models for rural health services be developed. These models should include health, education, transportation, outreach for case findings, and experimentation in financing of health care services. Any rural health program should provide increasing motivation for acceptance of health care.

In this day of regionalization and cooperative health planning, it is essential that there is rural representation on health planning councils. Professional and consumer voices from rural areas have too often been silent or absent in the past. There is a real need to help rural communities plan logically for development of health services. There must be recognition that small communities may never again have a physician located within their boundaries. There must be regionalization of planning and development of health services. Transportation to central health services must be planned. Use of health aids and allied health professionals will need acceptance. Communication must be improved. Basically, however, the problem can best be described in the words of Eugene O'Neill: "The child was diseased at birth, stricken with a hereditary ill that only the most vital of men are able to shake off. I mean poverty — the most deadly and prevalent of all diseases".

Pathophysiology and Management of Portal Hypertension

William D. Davis, Jr.*

The condition of portal hypertension continues to present physicians with more questions than answers and, as is true in so many other scientific areas, as knowledge is gained more complex problems are revealed awaiting solution. The most common variety of portal hypertension, that which is found in most instances of cirrhosis of the liver, is associated with an intrahepatic block to the portal circulation which is post-sinusoidal in location and results in sinusoidal hypertension. Under normal circumstances the blood supply of the liver[1], which is twofold, is carried at a pressure of approximately 80 mm H_2O in the portal veins and 100 mm H_2O in the hepatic artery. These are quite thoroughly mixed at the sinusoidal level as both empty into the sinusoid and in addition are joined by a number of arteriovenous connections at presinusoidal level. The resulting pressure is perhaps 60 mm H_2O. Drainage of the sinusoids into the hepatic vein by means of the central vein results in still further lowering of the pressure to approximately that of intravena caval or intrathoracic level. The intrahepatic system is fitted with a sphincter and valve system which permits intermittency to flow in all sinusoids and some considerable sluicing of blood from hepatic artery to portal vein, hepatic artery to hepatic vein, and portal vein to hepatic vein under various circumstances. Perhaps only about half of the sinusoids are simultaneously functional under ordinary circumstances. One of the features of this arrangement is that it permits a marked increase in hepatic blood flow with relatively little rise in portal pressure[2]. Lymphatic drainage is from the perisinusoidal spaces to the nodes at the hilum of the liver and thence by the abdominal lymphatics into the thoracic duct.

In nutritional and postnecrotic cirrhosis the dual pathologic change of replacement of collapsed stroma by ever-hardening fibrous tissue and the rejuvenation of areas of destroyed parenchymal cells into expanding regenerative nodules which are not supplied with conventional hepatic vascular structures results in stretching and splaying and compression of the pre-existing vasculature over and around the nodules and against the scar tissue[3]. The central veins and smaller divisions of the hepatic veinous drainage system seem to be especially poorly supplied with supporting stroma and thereby especially vulnerable to the increasing extrinsic pressure. There is also scarring and thickening of the hepatic lymphatics[4]. Sinusoidal pressure is thus raised to a sufficiently high level so that drainage despite the constructed exit or diversion to other vascular pathways occurs. Measurements of this pressure are reflected by the hepatic wedge pressure. Accompanying changes include increased lymphatic flow with increased protein content of the liver lymph[5A], and arterialization of the portal and hepatic venous blood due to opening or increased utilization of arteriovenous shunts in the liver. There is also good evidence to suggest the widening of arteriovenous shunts in the gastric wall, the mesentery, the spleen, and other areas[5]. A total increase in splenic blood flow has likewise been demonstrated[6]. In many instances there is evidence of increased arteriovenous connections in the peripheral circulation with dimunition of A-V oxygen difference, increased cardiac output and cardiac index, shunts in the form of vascular spiders in the skin, as well as pulmonary arteriovenous and portovenous connections[7,8,9]. Careful studies have revealed that in many instances high output cardiac failure and near failure is present, a condition which of course represents a hazard for possible surgical procedures in these patients[10]. Oxygen unsaturation of the peripheral arterial blood is a consequence of the pulmonary arteriovenous fistulae. The intrahepatic pressure changes may be so extreme in some instances that actual reversal of portal vein flow occurs and the portal vein is used as an additional exit

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for intrahepatic blood[11]. The mechanisms of these changes are as yet obscure though most opinions favor a humoral one, either the failure of the damaged or bypassed liver to inactivate certain humoral vasoactive substances or the manufacture of these substances within the damaged liver[12]. This has advanced the interesting hypothesis that hepatocytes initiate a humoral agent which throttles sinusoidal exit in order to assure an adequate blood supply for themselves in the face of increased perisinusoidal fibrosis[12A].

One of the major effects of this circulatory change is the shunting of a large volume of splanchnic blood away from the liver and into systemic venous return pathways through a number of collateral systems. The only ones of these which usually present a significant clinical problem are those in the wall of the gastrointestinal tract which result in the formation of esophageal and gastric varices. Why these vessels should be so peculiarly prone to bleeding is of interest. In the first place they are poorly supported by stroma and tend to dilate with increases in intralumenal pressure. According to Laplace's principle the lateral force on the wall of a fluid filled tube equals the product of the radius and the pressure on its wall. Thus, as the veins enlarge progressively less pressure is required to further increase wall tension and favor additional dilation. The added factors of negative intrathoracic pressure and periodic transmission of increased abdominal pressure through the collateral channels from the abdomen result in thinning out of the surrounding smooth muscle and elastic tissue and even disappearance of the mucosa immediately overlying the varix. An additional factor of importance perhaps contributing to the breakdown of perivenous tissue is the poor nutritional gradient in the esophageal and gastric wall in the presence of portal hypertension. Not infrequently a sudden increase of blood volume may seem to be the final precipitating factor in a bleeding episode.

With regard to the management of variceal bleeding it should be stated at the outset that by far the best treatment is prevention and we should all be urged to redouble our efforts to diagnose and treat incipient liver disease and to prevent the transmission of viral hepatitis and of course as far as possible the development of its complications. From the standpoint of prophylactic surgery there is now rather strong evidence that prophylactic portacaval shunt in unselected cirrhotics with esophageal varices does not result in significant increase in longevity over control patients even though the cause of death is no longer gastroesophageal bleeding[13]. The decrease in bleeding seems to be accompanied by a corresponding increase in the incidence of hepatic failure and death as a consequence. Conn[14], however, in a preliminary note has presented evidence that when prophylactic shunts are limited to patients with esophageal varices and ascites the survival may be significantly prolonged in comparison with a similar control group. It should be remembered that the interest in prophylactic shunts was stimulated by reports from large city community hospitals with a patient population largely made up of alcoholics which tended to show that the great majority of these patients died with or shortly after their first episode of variceal bleeding[15]. These figures, however, are at variance with our own and others from similar institutions which indicate that only one of ten patients die with their first bleed and that many survive for years after the first hemorrhage or the diagnosis of varices.

For the acute bleeding episode of course immediate stabilization of the patient, early localization of the site of bleeding, and estimate of the status of the hepatic disease are imperative. Immediate blood replacement with the use of a reasonable aliquot of fresh or fresh heparinized blood is important particularly in patients with advanced parenchymal disease. Immediate esophagoscopy and gastroscopy preceded by iced normal saline lavage permits identification of the site of bleeding and continuation of iced saline lavage or balloon cooling may be most helpful in stopping further blood loss. The use of pharmacological agents to throttle arteriolar feeding to the portal venous bed and consequent lowering of portal venous pressure may be helpful. Pitressin either intravenously or more recently by catheter into the superior mesenteric artery will usually stop bleeding at least temporarily[16]. The opposite approach with the use of Arfonad® has been thought helpful by one group. If control is unsuccessful with these measures a double balloon tube is still a useful means of controlling bleeding when the tube is properly placed and managed. It is most important that the balloons be carefully checked ahead of time

for defects by test inflation before use, that the gastric balloon after inflation be snugged against the cardia and that the esophageal balloon be inflated to an adequate pressure, perhaps 40 mg Hg. Constant tension is maintained by a pulley system with an attached weight of 250 to 500 grams. Utmost care with constant attendance is necessary to prevent aspiration (a small indwelling tube with continuous suction above the esophageal balloon is most helpful) or strangling should the tube become dislodged and occlude the larynx. Deflation after 24 to 36 hours in order to prevent esophageal mucosal necrosis is advisable.

As soon as bleeding is controlled, measures to combat hepatic coma may be needed. These include the use of frequent small doses of magnesium sulphate and glucose enemas in order to cleanse the intestinal tract of blood. Neomycin in dosage of 4 to 8 grams per day and electrolyte correction particularly supplying of adequate potassium will be helpful. Attention to nutrition with oral feedings where tolerated and intravenous glucose and albumin as needed are important. The need for protein restriction in the presence of coma needs to be kept in mind. With control of the bleeding assessment of the clinical status of the patient is begun. In addition to the usual searching history and careful physical examination, an evaluation of the serum bilirubin, albumin, tests of acute parenchymal damage, and, if at all possible, a needle biopsy of the liver are performed. It should be remembered that a significant number of patients with cirrhosis may bleed from varices as the first overt sign of their illness. Physical examination may reveal only a small liver and perhaps a palpable spleen. Even all conventional liver function tests may be normal in such patients [16A]. Liver biopsy permits a precise evaluation of the liver status with determination of the presence of acute hepatocellular necrosis, fatty infiltration, and inflammation—all rather promptly reversible lesions as opposed to burned out fibrotic scar with a healthy regenerated parenchyma, a relatively immutable situation. In the first instance valiant efforts to postpone surgical intervention for several weeks or months may be rewarded with a most pleasant decrease in surgical mortality, whereas in the second, delay offers no advantage and as soon as stabilization has occurred operation is indicated. In the event the bleeding cannot be stopped and emergency surgery is necessary, portacaval shunt has been our procedure of choice. Morbidity and mortality have been no worse than the "holding procedures" and rebleeding has not been a problem as it has with the other procedures. In skilled hands injection transesophagoscopically has been reportedly successful but we have had no experience with this technique.

Despite rumblings in some quarters that operation probably does not significantly prolong life in these patients, it seems to us that the evidence is clear that properly selected surgical procedures not only prevent death from hemorrhage but permit the patients increased longevity and productivity. In attempting to evaluate the patient for operation and to decide on the optimal surgical procedure notice should be taken of Warren's studies which indicate that the ill effects of portacaval shunt are directly proportional to the preoperative portal blood flow[11,16B]. In other words when the portal blood flow is brisk and into the liver diversion is lively to be followed by a catastrophe whereas when the blood flow is sluggish or reversed in the portal veins the creation of a shunt is likely to cause little difficulty and have the desired preventive effect on further bleeding. Attempts to elicit this information depend on what procedures are available. The splenoportogram when it demonstrates the portal vein entering the liver can be used to grossly estimate the portal flow. In a significant number of instances, however, perfusion will be so poor that one is unable to determine whether there is a thrombosis or simply poor perfusion[17]. The venous phase of a celiac and superior mesenteric arteriogram may serve the same purpose. The performance of a retrograde hepatovenogram at the time of catheter measurement of the hepatic wedge pressure can often demonstate the status of portal venous flow. In the instance of stagnation or reversal the contrast material enters the portal radicals easily and may proceed toward the hilum of the liver and into the main portal branch. Whereas in the event of brisk portal flow it is likely to enter the sinusoids and then other branches of the hepatic venous drainage. Percutaneous puncture of an hepatic radical within the liver affords opportunity for both pressure measurement and dye injection for the determination of direction of portal flow. Likewise catheterization of the

umbilical vein with entrance to the portal vein may afford the same information. An additional advantage to this approach is that in the poor risk patient a temporary or permanent portal decompression via plastic tube or a saphenous graft anastomosis may be effected[18]. The use of Gold radioisotope techniques to determine portal volume flow as advocated by Warren seems useful in his hands, although objections have been raised in other quarters as to their dependability. Some idea also of portal flow characteristics can be obtained at surgery by clamping the portal vein and measuring the occluded pressure on the hepatic side as compared with the occluded pressure on the intestinal side. In those instances in which the hepatic occluded pressure is quite high, it is unlikely that sufficient volume flow into the liver will occur to be a significant hazard to the shunted patient. Under these circumstances, a side to side portacaval shunt if not mechanically too difficult would seem to be the procedure of choice. An end to side shunt has the advantage of technical ease but the disadvantage of obviating the hepatic segment of the portal vein as an outflow track should vascular dynamics in the liver demand it. In instances of thrombosis of the portal vein a mesenteric caval shunt may prove useful. In those instances in which there is brisk portal flow into the liver, one of the devascularizing procedures of the spleen and stomach, such as that recommended by Womack and his colleagues[19], or Warren's[20] splenic decompression procedure would be warranted. A similar procedure is a central splenorenal shunt[21] which has in common with the Warren procedure continuation of some portal perfusion of the liver and an incomplete lowering of the portal hypertension. A great advantage of the devascularization procedures and the central splenic decompression is the minimal incidence of postoperative hepatic coma. In this connection Wilson points out many of the patients operated in the Boston prospective prophylactic shunt study would have been least favorable candidates by Warren's criteria for a portacaval shunt[21A].

Considerable controversy over the relationship of thoracic duct lymph pressure and flow to portal hypertension, presently exists. A good deal of difference of opinion would seem to depend on techniques of measurement and the emphasis by German workers on the breaking up of the thoracic duct into a number of smaller vessels just before entering the vein[22] might explain a good deal of the conflicting opinions and results[23]. Several dramatic successes in controlling bleeding varices and ascites by anastomosis of the severed thoracic duct to the jugular vein have been reported in European literature. A hazard in the immediate postoperative period in these patients is the precipitation of profound congestive heart failure by the sudden increase in venous pressure.

Complications of the shunting procedures, most of which are most prominent after portacaval shunt, include hepatic failure with coma, increase in the level of jaundice, peripheral edema, increase or development of ascites, particularly in instances of end to side shunt, increased frequency of duodenal ulcer, precipitation of hemachromatosis and accentuation of the phenomena of peripheral A-V fistulization. Proper selection of the operation should relieve the first five of these. Orloff[24] has shown from the standpoint of the pathogenesis of duodenal ulcer in postshunt patients, that the intestinal phase of gastric acid secretion is tremendously increased and prolonged in these patients over controls, whereas the fasting and cephalic phases as well as the gastric phase do not seem to be significantly different. That the devascularization procedures and splenic decompression would minimize this tendency seems evident. The mechanism of increased iron absorption and precipitation of hemachromatosis in these patients is uncertain but might possibly be related to increased acidification of the duodenal and jejunal contents by the same mechanism. The mechanism of accentuation of peripheral A-V fistula is unknown, and might well depend on further increase in circulating humoral agents either originating in or not caught by the liver.

In summary, the anatomical situation of the portal circulation and its collateral drainage via esophageal and gastric mural veins render patients with portal hypertension extremley vulnerable to bleeding. The presence of an already damaged liver with altered intrahepatic circulation increases the hazard of hypotension and shock in these patients. Prevention of advancing liver disease is by far the best approach to management of these patients but in those who have already developed varices at present prophylactic surgery is not indicated. However, a vigorous

attack at control of and determination of the site of bleeding once it has occurred is most important. In patients who can be predicted to have early improvement in liver status and function, a conservative approach with regard to surgery is indicated. In those who are likely to improve little or slowly, operation is indicated as soon as stability has been achieved. The type of operation employed must depend on as careful evaluation of the dynamics of the portal circulation as are possible under the circumstances.

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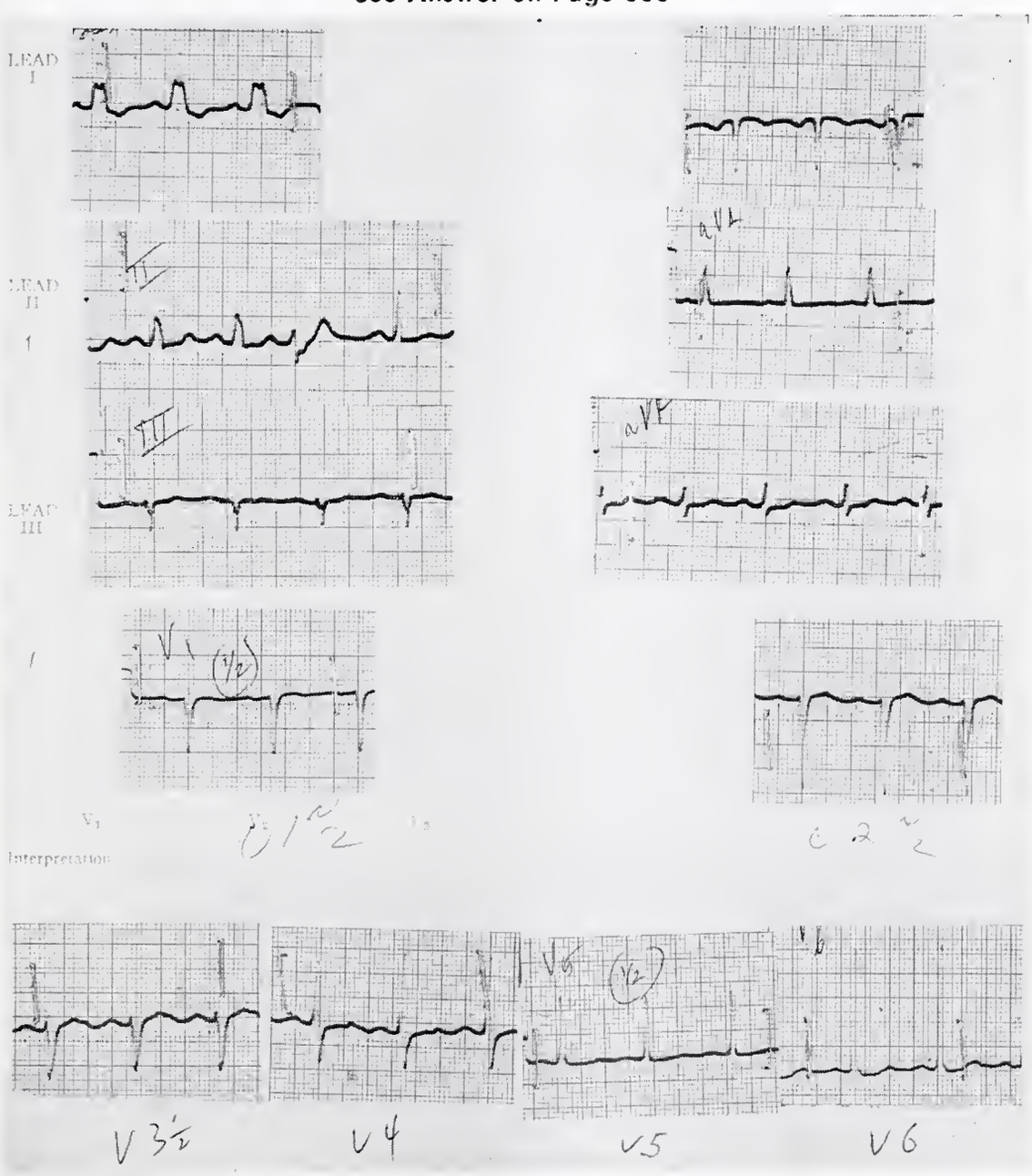
ELECTROCARDIOGRAM OF THE MONTH

AGE: 44 SEX: Female BUILD: Medium BLOOD PRESSURE: 112/80
CARDIAC DIAGNOSIS: Undetermined.
OTHER DIAGNOSIS: None.
MEDICATION: Digoxin O.'LSmg. g.d.
HISTORY: Patient has had documented episodes of left ventricular failure (Pulmonary edema) which is precipitated by exertion, particularly sexual intercourse. No other cardiac symptoms except for mild dyspnea on exertion.

See Answer on Page 333



The Department of Medicine, University of Arkansas Medical Center
James S. Taylor, M.D., Professor of Medicine

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 333

Phillip Smith, M.D.

HISTORY: This is a 55 year old white male with a four month history of upper thoracic pain. The work-up at that time, including a myelogram, was negative. The tenative diagnosis was myofascitis of the trapezius muscle. In the following four months prior to the present study, the patient developed gradual onset of nausea and vomiting with weight loss. The patient had a normal upper G. I. series seven months previously.

There was vague epigastric tenderness without a palpable mass. The only other singificant finding was a firm 2 x 2 cm. left supraclavicular node.

PUBLIC HEALTH AT A GLANCE

Intestinal Parasites of Arkansas

Charles S. Ivy* and John E. Steed**

An up-to-date survey from January 1, 1970, through the month of September 1970, shows that the Arkansas State Department of Health has received 778 stool specimens for intestinal parasite examination. Of this total, numerous specimens have been resubmitted when organisms were found to be present. This was for final confirmation and also to gather specimens for our laboratory improvement program. Therefore, of the organisms listed by each county, many of these are repeat specimens on the same patient who was found to have parasites.

Those counties submitting specimens where no parasites were found are listed in table 1. Table 2 gives the breakdown for specimens submitted by counties when there were organisms found. Listed are the total number of specimens received, the total number of positive specimens, the number of patients reporting at least one organism (total number of positives minus repeat positive specimens), and the organisms found. The organisms found are listed by the total number of an organism found in all stool specimens submitted by a county and the number of patients reporting this organism (excluding repeat specimens). Example — Ascaris lumbricoides 9/4 (Benton Co.). Table 3 illustrates evidence of individual patients being infected by multiple parasites.

As of May 22, 1970, the University of Arkansas Medical Center began submitting its intestinal parasite specimens to the State Health Department for examination. This accounts for the large number of specimens being received from Pulaski County — over one-half coming from the medical center. In the table, the medical center is listed as separate from the rest of the county. This number does not reflect a true number of specimens received from Pulaski County, nor does it give the county of residence of each patient since the medical center receives patients from all over the state. However, in the future, the specimens from the medical center will also be listed as to each patient's county.

The intestinal parasite kits are prepared by the State Health Dept., and are then mailed to the county health units to be distributed, or they can be directly obtained by a hospital or physician upon request. This kit is the two-vial method recommended by the National Communicable Disease Center in Atlanta. It consists of a vial of 5% formalin fixative and a vial of PVA fixative with instructions included in each kit. The 5% formalin preserves helminth eggs, larvae, and protozoan cysts. The polyvinyl alcohol fixative (PVA) also preserves the eggs, larvae, and cysts; but it also has the advantage of preserving the protozoan trophozoites. This is especially helpful when only loose or watery specimens are available. (The usual case is that trophozoites

TABLE 1
COUNTIES SUBMITTING SPECIMENS WITH NO PARASITES FOUND

County	Number of specimens submitted	County	Number of specimens submitted
Arkansas	2	Grant	30
Boone	3	Independence	1
Bradley	3	Jefferson	4
Clark	9	Lawrence	2
Cleburne	4	Lee	3
Columbia	5	Lincoln	1
Crawford	1	Logan	2
Crittenden	1	Miller	11
Desha	1	Mississippi	4
Faulkner	2	Montgomery	1
Fulton	3	Sebastion	1
Garland	6	Union*	3

*3 additional PVA-fixed specimens of gall bladder drainage were received which contained Clonorchis sinensis.

*Microbiologist, Parasitology Laboratory, Arkansas State Dept. of Health.
**Microbiologist, Laboratory Improvement Program, Arkansas State Dept. of Health.

are not readily found in formed specimens.) Unpreserved specimens or enteric bacteriology specimens are not recommended for parasite study. The length of time an unpreserved specimen is in the mail allows the organisms to degenerate to the point where they are difficult to recognize.

TABLE 2
INCIDENCE OF PARASITES BY COUNTIES

County	Total Specimens Received	Total Positive Specimens	No. of Patients Reporting at least 1 Positive Specimen	ORGANISMS FOUND											
				Entamoeba histoly	*E. hart.*	*E. coli*	*Endolimas nana*	*D. fragilis*	*Giardia lamblia*	*A. lumb.*	*Hook-worm*	*S. ster.*	*H. nana*	*E. verm.*	*T. t.*
Baxter	7	1	1							1/1					
Benton	36	15	7			9/5			3/3	9/4		2/1	4/2		
Carroll	1	1	1		1/1										
Chicot	68	47	30	10/7	5/4	17/13	8/6	1/1	2/2	35/21					8/5
Clay	18	2	1						2/1						
Cleveland	4	1	1			1/1									
Craighead	6	3	3			3/3									
Dallas	23	5	2						5/2						
Drew	80	16	12			5/5	3/3		10/6	5/4					
Hot Spring	93	27	18			12/6	2/2		13/7	7/4	8/6		6/4	1/1	
Monroe	12	2	1			2/1	1/1								
Pope	52	4	3				2/1		1/1					1/1	
Prairie	33	4	1	2/1	1/1	4/1	1/1	2/1							
Pulaski	62	4	3						2/2						2/1
Saline	7	1	1						1/1						
Searcy	1	1	1				1/1								
White	48	4	3		2/1	1/1	1/1		2/1						
Yell	8	1	1				1/1								
SUBTOTAL	559	139	90	12/8	9/7	54/36	20/17	3/2	41/26	57/34	8/6	2/1	10/6	2/2	10/6
Pulaski, UAMC	114	16	10	3/1		4/4	3/3		1/1	4/2		3/1			
TOTAL	673	155	100	15/9	9/7	58/40	23/20	3/2	42/27	61/36	8/6	5/2	10/6	2/2	10/6

Enteric media will distort the organisms and makes the specimen more difficult to concentrate. Direct mounts with saline and iodine are made on the formalinized specimens. Also, the formalin-ether sedimentation technique is used with saline and iodine-stained mounts being made. Permanent slides are made from the PVA-fixed specimens and are stained by the trichrome staining technqiue.

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Patients listed numerically	*Total number of specimens submitted*	*Number of Parasitic species evident in one or more specimens*	*Number of times species seen during each patient's specimen series*					
			E. hist	*Giardia lamblia*	*Nematode eggs or larvae. *(note)*	*E. nana, E. hart. & D. fragilis*	*E. coli*	*H. nana (tapeworm)*
No. 1	4	5	2			4	4	
No. 2	2	2		1		2		
No. 3	1	2		1			1	
No. 4 **(note)	2	2				1	2	
No. 5	2	2					1	2
No. 6	2	2		1			2	
No. 7	3	3			***(note) 5 (3 A.l.—2 S.s.)		2	
No. 8	2	2		1				2
No. 9	2	3		1	2 (Ascaris l.)		2	
No. 10	2	2			2 (Ascaris l.)		2	
No. 11	2	3		2	2 (Ascaris l.)		1	
No. 12	1	2			1 (Ascaris l.)		1	
No. 13	1	2			1 (Ascaris l.)		1	
No. 14	1	3		1	1 (Ascaris l.)	1		
No. 15	2	2			2 (Hookworm sp.)		2	
No. 16	2	3		2			1	2
No. 17	2	3			3 (1 A.l.—2 H.W.)			2
No. 18	1	4		1	2 (1 A.l.—1 H.W.)			1
No. 19	1	3		1	1 (Hookworm sp.)			1
No. 20	1	2			1 (Hookworm sp.)		1	
No. 21	6	3		6	4 (Ascaris l.)		5	
No. 22	2	2				1	2	
No. 23	3	4	3		6 (3 A.l. & 3 T.t.)	1		
No. 24	1	2			2 (1 A.l. & 1 T.t.)			
No. 25	1	2	1		1 (Trichuris t.)			
No. 26	1	3	1		2 (1 A.l. & 1 T.t.)			
No. 27	1	2		1	1 (Ascaris l.)			
No. 28	2	2			2 (Ascaris l.)		2	
No. 29	3	5	1		2 (Ascaris l.)	2	2	
No. 30	2	2				2	2	
No. 31	1	3			1 (Ascaris l.)	1	1	
No. 32	1	3			1 (Ascaris l.)	1	1	
No. 33	2	5	2		2 (Ascaris l.)	6	2	
No. 34	1	2			1 (Ascaris l.)	1		
No. 35	2	3	1		1 (Ascaris l.)		1	
No. 36	1	5	1		1 (Ascaris l.)	2	1	

*A.l., S.s., T.t., H.W. stand for respectively, Ascaris lumbricoides, Strongloides stercoralis, Trichuris trichiura, and Hookworm species

**Series of patients falling between double lines and demarked by a bracket are all in the same family.

***The first number is the sum of the various nematode species evident. Only Strongyloides was seen in the larval stage. Inside the parenthesis the individual species are listed separately.

EDITORIAL

Bartter's Syndrome

Alfred Kahn, Jr., M.D.

The National Institute of Health at Bethesda, Maryland, has been an outstanding symbol of good medicine in the U.S.A. It has excelled in teaching, care of the patient, and research. Many interesting papers come from the staff of this institution.

In December, 1962, Bartter, Pronove, Gill, and McCardle published a paper entitled "Hyperplasia of the Juxtaglomerular Complex with Hyperaldosteronism and Hypokalemic Alkalosis," (American Journal of Medicine, Vol. 33, p 811, 1962). They described two cases in which they found a histologic change theretofore undescribed in association with certain metabolic abnormalities. In both a 5 year old Negro boy and a 25 year old Negro man, they found hyperplasia and hypertrophy of the renal juxtaglomerular complex in association with primary aldosteronism and hypokalemic alkalosis; furthermore, both patients were normotensive. Bartter's Syndrome is to be distinguished from Conn's previous description of primary aldosteronism and its relationship to hypertension which is reviewed in Archives of Internal Medicine (Vol. 107, p 813, June, 1961); Conn states "Primary aldosteronism is a definite clinical and pathological entity produced by an aldosterone secreting adrenal cortical adenoma and relieved by surgical removal of the tumor. A group of sometimes incapacitating symptoms due to muscular and renal dysfunction disappears soon after operation. These symptoms are associated with the chronic hypernatremic hypokalemic alkalosis which characterizes the disease". Conn differentiates the above from secondary aldosteronism. Conn strongly related hypertension and aldosteronism. Subsequent authors have modified our understanding of the relationship which Conn has described.

Bartter summarized his findings as follows in 1962. "A new syndrome characterized by hypertrophy and hyperplasia of the juxtaglomerular appartus of the kidneys, aldosteronism resulting from adrenal cortical hyperplasia, and persistently normal blood pressure. Overproduction of aldosterone could not be prevented by sodium loading", etc. He further stated that this new syndrome was associated with hypokalemic alkalosis and the kidneys had a poor concentrating ability even after the injection of pitussin. His patients had increased circulating angiotensin. Injected angiotensin II produced a less than normal rise in blood pressure. He postulated that there was a primary resistance to angiotensin's pressor effect and there was a compensatory over manufacture renin, and subsequently angiotensin; the angiotensin stimulated the adrenal cortx.

Goodman, Vagnucci, and Hartroft have suggested a possible etiology for Bartter's Syndrome. They studied a 9 year old girl with a mental impairment and sub-normal growth. The patient did not have hypertension; she had a renal biopsy, which showed hyperplasia and hypergranulation of the juxtaglomerular cells; she had increased plasma renin, low serum potassium and hyperaldosteronism. Several experimental metabolic studies were performed on this patient to try and determine the etiology of her Bartter's Syndrome. They administered potassium and raised the serum level and at the same time kept sodium balance normal, and found that aldosterone excretion increased, albumen was infused and plasma renin fell and angio-

tensin pressor effect was resumed at normal sensitivity. Hypokalemia could not be corrected by reducing aldosterone to normal levels with albumen and other substances. They stated that Hyperaldosteronism did not seem to be the cause of the low serum potassium and they speculated that "in some patients with Bartter's Syndrome the primary defect is impairment of proximal sodium reabsorption".

Bartter's Syndrome is an interesting metabolic abnormality which is rather uncommon. But an understanding of it's etiology may throw light on some patho-physiologic relationships seen in more common disorders.

PROCEEDINGS OF SOCIETIES

Columbia County Elects 1971 Officers

Dr. Ronald Baldwin was elected president of the Columbia County Medical Society and chief of staff for Magnolia Hospital at a January meeting of the organizations.

Vice-president and chief of staff is Dr. Charles W. Kelley. Dr. C. H. Weber was named secretary-treasurer of both the county medical society and the hospital staff.

Dr. C. L. Weber was elected as delegate to the State Society's House of Delegates and Dr. Joe Rushton was chosen as alternate delegate.

Dr. John Sneed To Serve As President

Dr. John Sneed was elected president of the Baxter County Medical Society at a January meeting of the organization. Other 1971 officers are Dr. Doyle Kinder, vice president; Dr. Jack C. Wilson, delegate; and Dr. John F. Guenthner, alternate delegate. Dr. Ben N. Saltzman was reelected secretary-treasurer.

Magnolia Doctor To Head Fifth Councilor District Medical Society

Dr. Joe F. Rushton of Magnolia was named president of the Fifth Councilor District Medical Society of the Arkansas Medical Society in a January meeting of the organization.

Other new officers include Dr. Wayne Elliott of El Dorado, vice president, and Dr. Jack Dobson of Fordyce, secretary. Dr. Kenneth Duzan of El Dorado and Dr. George F. Wynne of Warren continue as councilors for the district.

ANSWER—Electrocardiogram of the Month

RATE: 87/min. RHYTHM: Sinus

PR: .21 sec. QRS: Vorioble 0.16 & .0 sec. QT: 0.36 sec.

SIGNIFICANT ABNORMALITIES:

QRS in Leod I 0.16 sec. — Seen only tronsiently

PVC in Leod II

Voltoge ($V_1 + V_6 = 15$mm) & Non-specific ST-T suggestion for LVH

INTERPRETATION: Abnormol

Intermittent LKBB, rore premoture ventriculor controction. 1st A-V block. Suggestive LVH.

DISCUSSION: In loter months pl. hos developed & kept a left bundle bronch block.

AINSWER—Radiology Case of the Month

DIAGNOSIS: Corcinomo of the stomach.

The ontrum is persistently deformed with the suggestion of multiple ulcerations.

Gostroscopy reveoled on ulceroted mass in the antrum. Although the gostric analysis wos normal, a biopsy reveoled adenocarcinomo. Metostatic diseose to the suproclavicular node and o complete block of the spinal conol ot the T4-5 oreo wos found.

DISCUSSION:

Eighty per cent of carcinomo of the stomoch is of the proliferoting or vegetotive type. In this type, the tumor forms o bulky moss thot projects into the gostric lumen and couses o filling defect in the borium shodow. The surfoce of the defect is irregulor or nodulor. Superficiol or deep ulcer pockets moy be present, but the evidence of ulcerotion is less obvious than is the moss of the tumor. The mucosal folds ore completely obsent over the surfoce of the lesion. The defect is constont, rigid, and reproducible throughout the exominotion, or at repeot examinotions. The junction of the filling defect ond the gostric wall usuolly is distinct ond often forms on ocute ongle, giving on effect of overhonging edges. With smoll lesions, the defect is limited to one wall or one curvoture; lorger lesions completely encircle the stomach and couse irregulor fixed narrowing of the gostric lumen.

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MEDICINE IN THE NEWS

ARKANSAS PSRO INVITES STATE'S CONGRESSIONAL DELEGATION TO ATTEND ITS MEETINGS

The letter of invitation below was extended to each of the State's four Congressmen and both Senators by the Arkansas Medical Society and is reprinted in this issue of the Journal as a matter of information for the Society's membership.

January 12, 1971

The Honorable Wilbur D. Mills
The House of Representatives
Washington, D. C. 20515

Dear Mr. Mills:

During congressional consideration of the Social Security Amendments of 1970, you read and heard much about "peer review" and professional standards review organization (PSRO).

It has occurred to the officers of the Arkansas Medical Society that you might be interested in seeing, first hand, how our Arkansas PSRO functions. We want you to know what is being done. Accordingly, we invite you and urge you to attend any of our PSRO meetings at your convenience. So that you can be assured you will see a meeting as it is usually conducted (not staged for your benefit), we invite you to be present for any of our monthly sessions. They are ordinarily held on the fourth Wednesday of each month at 2:00 P.M. in the Blue Cross-Blue Shield Building in Little Rock. The next meeting will be held on January 27th. We will send you an invitation for each meeting in the future so that you can attend if you will be in Little Rock.

The agenda for the meetings are mailed to the members of the reviewing team a week in advance of each meeting. Included is all available information on each case to be reviewed *except* that all identifying information is removed. All references to the name of the doctor, the patient, the hospital, or the town are obliterated so that personalities will not be a factor in the adjudication. There are twenty-one physicians on the committee representing all branches of medicine. Sub-specialty representatives attend only when a case in the sub-specialty will be discussed.

Since the information discussed is privileged and confidential, we cannot extend an invitation to your representative, but we certainly hope you can attend in person.

We believe you will find that your attendance at a meeting of the PSRO will be a rewarding experience. Please feel free to come with or without prior notice.

Very truly yours,

ARKANSAS MEDICAL SOCIETY
Paul C. Schaefer
Executive Vice President

THE MONTH IN WASHINGTON

The federal government now has the authority to expand the U. S. Public Health Service to provide direct medical and other health care services in ghettos and rural areas where there are shortages of physicians and other health personnel.

Before such a program can be started, the state and local medical society must certify that it is needed.

The Senate approved the authorizing legislation, 66 to 0, and the House by an almost unanimous voice vote. President Nixon signed it into law on Dec. 31 although the secretary of Health, Education and Welfare, and the PHS surgeon general had asked Congress to defer action until the President had presented his overall health program early this year.

The legislation authorized $10 million for the current fiscal year ending next June 30, $20 million for fiscal 1972 and $30 million for fiscal 1973. The money must be appropriated before it is available for the program.

In its report approving the legislation, the House commerce committee expressed a hope that it would help revitalize the PHS which the

Nixon Administration reportedly has been planning to further downgrade, or even eliminate, in a reorganization of the health activities of HEW.

"That the Public Health Service has been allowed to languish, and that the great functions it has performed have largely been stripped from it, is the fault of this and previous administrations, and a tragedy from the standpoint of the nation's health needs," the committee report said.

Physicians enlisting in the program will become PHS commissioned officers and, as such, be exempt from the military draft. Fees paid for their services will be set by the HEW secretary and go into the U. S. treasury.

The HEW secretary has the responsibility of determining, after consultation with local officials and health groups, what areas need such a program. He then can assign PHS personnel there after receiving a request from a state or local health agency or other public or nonprofit private health organization and a certification of need from the state and local medical society.

* * *

The new law — the "Emergency Health Personnel Act of 1970" — also provides for the establishment of a 15-member National Advisory Council on Health Manpower Shortages. It will include three members from the health professions, three members from state health or health planning agencies and four from the general public representing consumers of health care.

* * *

President Nixon was pronounced in "excellent health" with a "young man's blood pressure" after his annual physical checkup.

Air Force Brig. Gen. Walter Tkach, M.D., the President's physician, said that all the tests given the nation's chief executive at the Bethesda (Md.) Naval Medical Center were within normal limits. The examination team of five physicians including himself, Tkach said, found Nixon's blood pressure to be 118/82 compared to last year's reading of 120/80. He described it as a "young man's blood pressure, ideal" for the president who was only 10 days short of his 58th birthday.

Tkach's only recommendation for Nixon was that he take more time for exercise and recreation, preferably in California or Florida. The President partly heeded the advice, going to California shortly thereafter for a "working vacation."

* * *

Three major reports before the federal government urge extensive programs to combat cancer and heart disease.

A special panel of 26 expert consultants, in a report to the Senate Labor and Welfare Committee, urged a multi-billion dollar crusade against cancer in an effort to erase its "staggering" impact of death and suffering caused by the disease.

The National Advisory Cancer Council urged increased educational efforts by both governmental and private agencies to warn the public against the hazards of smoking.

The Inter-Society Commission for Heart Disease Resources recommended a program that would promote drastic changes in the nation's dietary habits, elimination of cigarette smoking and research into the causes of high blood pressure.

The latter two bodies were set up by the Department of Health, Education and Welfare. The heart disease commission is made up of more than 100 experts in cardiovascular disease, epidemology, radiology, rehabilitation and surgery from 29 medical organizations, including the American Medical Association, the American Heart Association, the American Nurses Association, the American Hospital Association and the College of Cardiology.

Based on a four-month study, the cancer report to the senate committee included an estimate that 50 million Americans now living will develop the disease and that 34 million of them will die unless immediate steps are taken to curb it.

The consultants recommended a sweeping program keyed to consolidation of all existing cancer research projects into a national cancer authority directly responsible to the president.

"The Committee is unanimously of the view that the conquest of cancer is a realistic goal if an effective national program along the lines in the report is promptly initiated and relentlessly pursued," said Benno C. Schmidt, co-chairman of the group.

The report recommended doubling cancer research spending to $400 million in the 1972 fiscal year, and increasing it by $100 million to

$150 million in subsequent years to a $1 billion level in 1976.

The panel of consultants, which included labor and civic leaders as well as distinguished cancer researchers, said that the program should be devoted primarily to research into the causes and cures of cancer, rather than to patient care.

The National Advisory Cancer Council's fourth annual report on the state of the art in cancer research cited the more than 60,000 deaths a year in the United States from an "epidemic" of lung cancer attributed mainly to cigarette smoking. The report dealt with the chemical causes of cancer and the effects of many environmental factors, not only the "private pollution" of smoking but also the more public air pollution from industrial and commercial wastes, as causative agents in malignant disease.

As of January 2, a ban on all advertising of cigarettes on television and radio became effective under legislation approved in the Congress, and all packages of cigarettes manufactured and sold in the United States now must carry a new printed warning: "The Surgeon General has determined that cigarette smoking is dangerous to your health." This replaced the milder warning required by a 1965 law that expired in 1969 which said: "Caution: cigarette smoking may be hazardous to your health."

Although a substantial portion of this report of the Council was devoted to the problem of smoking and health, it was stated that the production of cancer by chemicals is part of a larger problem of the hazards facing man in a polluted environment. The report pointed out that the death rate from cancer continues to increase despite steady improvement in the cure rate, and suggested that this may be related largely to increased exposure of the population to cancer-causing agents in the environment.

The heart disease commission's report said the nation's cholesterol-rich diet, cigarette smoking and high blood pressure are the primary reasons for one million heart attack deaths and 600,000 heart disease deaths in the United States annually. The report cited five secondary factors: obesity, diabetes, tensions, sedentary living and heredity.

The commission urged "safe and reasonable" changes in everyone's diet to reduce saturated fats and cholesterol even though present evidence that such dietary changes would help is now "suggestive" rather than "conclusive." In an effort to obtain "conclusive" evidence, the commission's experts recommended large-scale, federally-financed scientific studies of American eating habits and their consequences in terms of heart-artery health or illness. The commission envisaged studies costing about $80 million, requiring 10 years and involving some 60,000 persons on typically high-fat diets as subjects.

* * *

Congress appropriated for the Department of Health, Education and Welfare more than $400 million more for the current fiscal year (1971) for its health programs, other than medicare and medicaid, than was requested by the Nixon Administration.

The appropriation approved by Congress was a compromise between House and Senate figures and represented increases over Administration allotments with the exception of the two for the Food and Drug Administration and Comprehensive Health Planning which were the amounts requested — $89.5 million and $247.1 million, respectively.

The total HEW appropriation for specific health programs amounted to $739.9 million. The National Institutes of Health appropriation included $275.9 million for health manpower programs, $33.7 more than asked. The mental health appropriation totalled $379.5 million, a $32.8 million increase. A $196.5 million appropriation for medical facilities construction included a $107.2 increase. There was a $300,000 increase in the maternal and child health appropriation of $255.6 million.

* * *

The Nixon Administration has been urged by a "Health Caucus" headed by the American Medical Association's president to give a high priority to health services for children.

The caucus comprised representatives of the AMA, the Women's Auxiliary to the AMA, and the American Dental Association at the White House Conference on Children. Dr. Walter C. Bornemeier, president of the AMA, was chairman.

Stephen Hess, chairman of the conference, said he would forward to President Nixon a letter outlining the unanimous views of the caucus. The letter was accompanied by a resolution on child health care adopted by the

House of Delegates at the AMA's 1970 clinical convention in Boston, Mass. The caucus cited the resolution's five recommendations as examples of steps that should be taken to improve child health care. The recommendations:

—That relevant parent health education related to total health of the mother, leading to the seeking of prenatal care, be made available on a wide scale.

—That medical care that anticipates high risk mothers be made more readily available.

—That in each state a system of intensive care units of potential high-risk mothers and infants be developed.

—That the conference urge the expansion of the health aspects of programs for all school children.

—That all payors of health care (the insurance industry) structure their contracts to cover the newborn from the moment of birth.

New Service for Arkansas Physicians

Dr. C. W. Silverblatt, coordinator of Arkansas Regional Program, announced the beginning of a new service for physicians of Arkansas.

Initiated on February 9, the Dial-Access-Service offers toll-free medical information to all practicing physicians in the State.

Objectives of the program are to provide authoritative core information on a variety of medical subjects for emergency situations and as a method of up-dating medical information, so as to have available information at all hours of the day or night accessible to the physician wherever might be.

The U. S. Food and Drug Administration Needs Your Help

There are approximately 4,000 deaths and 150,000 injuries annually associated with the burning of wearing apparel and interior furnishings. It is the responsibility of the U. S. Food and Drug Administration to investigate these deaths and injuries resulting from fabric ignition. The information obtained is forwarded to the Department of Commerce for its use to promulgate standards on fabric flammability which ultimately will decrease deaths and injuries associated with the burning of fabrics.

Our investigations consist of interviewing the victim when possible, the victim's parents when children are involved, other persons involved in the accident and eye witnesses, closely examining the site of the accident, and collecting a fabric remnant when possible. I would like to emphasize that our records are kept confidential and the individual's identity will not be revealed. Our primary concern is with the sequence of events surrounding the accident. For our purposes, we are not involved with what action the patient takes after he receives medical advice, the emergency medical care rendered, or the long term management of the patient.

Since the greater majority of burns are treated in your office, we ask that you contact us when you have a burn case attributable to flammable fabrics.

We are only interested in those cases which would show that the incident would not have occurred had not the fabric ignited.

It is essential that these investigations be made as soon as possible after the occurrence, and ask that you contact our office at these locations:

Department of Health, Education, and Welfare
Food and Drug Administration
702 North "A" Street
Fort Smith, Arkansas 72901
Telephone Number: 501-782-0911

Department of Health, Education, and Welfare
Food and Drug Administration
Room 508, Post Office Building
Little Rock, Arkansas 72202
Telephone Number: 501-372-4361 Extension 5257

PERSONAL AND NEWS ITEMS

Medical Seminar Begins

The first in a series of six psychiatric seminars sponsored by the Baxter County Medical Society and the University of Arkansas, Department of Psychiatry, began in January.

The topic for the initial program will be "Drug Therapy in Mental and Emotional Disturbances" and will be presented by Dr. Robert F. Shannon.

Lectures for these seminars are from the staff of the postgraduate continuing education department, Department of Psychiatry, University of Arkansas Medical Center.

Dr. Robert Matthews is coordinator for the entire program and it is designed to carry pertinent psychiatric information to physicians all over the State.

Little Rock Physician Speaks at Heart Seminar

Dr. W. Sexton Lewis, President of the Arkansas Heart Association, was the keynote speaker at a Grant County program on Heart and Circulatory Diseases in mid-February.

Dr. Jack M. Irvin was a member of a panel which discussed the Importance of Maintaining Good Health at the seminar which was held in Sheridan and was co-sponsored by the Grant County Medical Society.

Armed Men Rob Doctor At Searcy

Two armed, masked men robbed Dr. and Mrs. Hugh Edwards of Searcy in their home in mid-January and threatened their lives. The thieves took an undetermined amount of cash and jewelry. The State Police Criminal Investigation Division, in cooperation with local authorities, is assisting in the search for the two men.

Dr. Joe Hughes Speaks to Osceola Future Physicians

Guest speaker for the January meeting of the Future Physicians of America Club of Osceola was Dr. Joe Hughes. Dr. Hughes presented a lecture and discussion period on the human eye.

Dr. L. D. Massey, a sponsor of the club, presented as a conclusion to the meeting a film on the heart.

Dr. Juniper Speaks at Two Seminars

Dr. Kerrison Juniper, Jr., professor of medicine at the University of Arkansas School of Medicine and co-ordinator of technology for research in medical education, spoke during the first two months of this year at two international medical seminars.

Dr. Juniper spoke to a January meeting of the Global Medicine Course at the Walter Reed Army Institute of Research in Washington. In February, he addressed the third Seminar on Amebiasis at Mexico City, sponsored by the National University of Mexico and the Mexican Institute for Social Security.

Mountain Home Physician Named To Committee

Dr. Ben N. Saltzman of Mountain Home has recently been appointed by the Board of Directors of the American Academy of General Practice to serve as chairman of the Committee on Mental Health. The purpose of the committee is to stimulate postgraduate training in psychiatry at the State level. The committee consists of ten physicians from over the fifty states who serve as regional coordinators.

Former AMA President Addresses Fifth Councilor District Physicians

Dr. Milford O. Rouse of Dallas, Texas was the featured speaker at a recent meeting of doctors in the Arkansas Medical Society's Fifth Councilor District.

The meeting, which was held in El Dorado, dealt with continuing dialogues between medicine and religion. Dr. Rouse titled his address "Therapy of the Total Man".

Dr. Rouse is a former president of the American Medical Association. He also served for seven years as vice-speaker and then speaker in the AMA House of Delegates.

Dr. John Miller of Camden, who serves as chairman of the Arkansas Medical Society's Committee on Medicine and Religion, handled program arrangements.

1971 Staff Officers Named At Park Medical Hospital

Dr. William R. Mashburn has been elected chief of staff of Park Medical Hospital in Hot

Springs. Also to serve on the hospital staff are Dr. George J. Fotioo, vice chief of staff, and Dr. E. K. Clardy, secretary. Executive committee members include Drs. Robert L. Lew and Jack A. King, retiring chief of staff.

Physician Seeks Beebe School Board Post

Dr. Garrett Kinley recently announced his candidacy for a position on the Beebe School Board. Dr. Kinley stated that his purpose in seeking the position is to help in the continued improvement of local schools within the limits of local financial resources.

Ouachita Memorial Hospital Elects 1971 Staff

Officers of the Ouachita Memorial Hospital Medical Staff for the year 1971 are Dr. John W. Trieschmann, chief of staff; Dr. John L. Haggard, secretary; and Dr. Robert L. Hill, vice chief of staff.

The hospital is located in Hot Springs.

Dr. Hansford Holt Suffers Stroke

Dr. H. H. Holt, a retired physician in Nashville, suffered a stroke in mid-January. Best wishes are extended to him for a speedy recovery.

Dr. Poindexter Presents Drug Abuse Program

Dr. Douglas A. Poindexter of Conway presented a program on drug abuse at a luncheon meeting of the Conway Twentieth Century Club at its January meeting. His address, which included information concerning the use and abuse of drugs, was followed by a question and answer period.

Drs. Hayes and Young Announce New Associate

Drs. Robert A. Hayes and J. Hosea Young of Wynne announced recently that Dr. James R. Jacobs has joined them in the practice of medicine and surgery.

Dr. Lewis New American Heart Association Director

Dr. W. Sexton Lewis of Little Rock has been elected to the board of directors of the American Heart Association. Dr. Lewis is president of the Arkansas Heart Association and is believed to be the youngest physician elected to the AHA board, half of whose members are physicians and half laymen.

Burglars Enter Doctor's Office

Burglars entered the office of Dr. John A. Hall of Cinton in January, but apparently were surprised in the act before taking anything. Entrance to the office was gained by prying open a back door and several desk drawers had been opened but Dr. Hall could not find anything missing.

Drs. McCartney and Faulkner Announce New Associate

Drs. Pat McCartney and H. N. Faulkner, of the McCartney-Faulkner Clinic in West Helena, announced that Dr. Marion A. McDaniel has joined them recently in the practice of medicine and surgery.

Memorial Hospital In Conway Announces 1971 Staff

Dr. Robert L. Clark of Conway is the new Chief of Staff at Memorial Hospital in that city. He succeeds Dr. Bob Banister. Dr. Douglas A. Poindexter was named vice chief of staff; Dr. J. J. Magie was elected secretary.

Brinkley Mercy Hospital Names 1971 Staff

Dr. W. L. Walker was named Chief of Staff for Mercy Hospital in Brinkley to serve during 1971. Dr. M. L. Dalton was named vice chief of staff and Dr. J. P. Williams, Jr., was elected secretary.

Doctors' Offices Are Burglarized

The offices of Dr. Frank Morgan and Dr. Marion Church of North Little Rock were broken into in late January and an amount of cash was taken. The office building is located about one and one-half blocks from the North Little Rock Police and Courts building.

Clinic Has New General Practitioner

The Millard-Henry Clinic of Russellville announces that Dr. James N. Carter has joined its staff as a general practitioner. Dr. Carter replaces Dr. Robert M. Franklin as a general practitioner on the clinic staff. Dr. Franklin is now specializing in internal medicine at the clinic.

El Dorado Physician Addresses Kiwanis Club

"The Thoroughbred Industry In South Arkansas" was the topic discussed by Dr. W. S. Rainwater in an appearance before the Kiwanis Club at a January meeting in El Dorado.

Dr. Miller New Hospital Chief Of Staff

Dr. John Miller of Camden has recently become Chief of Staff of Ouachita Hospital, re-

placing Dr. Tom Meek. Dr. Miller will serve the hospital, located in Camden, during 1971.

Rubella Clinic Held In Chicot County

The Rubella vaccine was administered to all Chicot County children from age one through age 10 early in February. The program was sponsored by the Chicot County Medical Society, the school districts, and the State and county health departments.

Director of Health Planning Program Assumes New Duties

Since February 1, 1971, Mr. Walter B. Clancy, Director of Arkansas Health Planning Program, has assumed new duties as a member of the faculty of the Arkansas School of Social Work. Until a new director is appointed, Mr. Clancy continues as Acting Director of the Program.

RESOLUTIONS

WHEREAS, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of its esteemed member, Dr. Wilburn M. Hamilton, and

WHEREAS, Dr. Hamilton served the community in his professional capacity as a physician for more than twenty years, and

WHEREAS, Dr. Hamilton was an honored and valuable member of this Society:
BE IT THEREFORE RESOLVED:

THAT, the members of the Pulaski County Medical Society take this means to express to the family of Dr. Hamilton their deepest sympathy, and

THAT, this resolution be made a part of the permanent minutes of the Society, and

THAT, a copy of this resolution be forwarded to the Arkansas Medical Society for publication in the Journal.

By Direction of the Memorial Committee
H. Duel Brown, M.D., Chairman
Henry G. Hollenberg
Robert Watson

Adopted unanimously
Executive Committee
Pulaski County Medical Society
January 20, 1971

AMERICAN MEDICAL ASSOCIATION
HOUSE OF DELEGATES
MEMORIAL RESOLUTION
RUFUS B. ROBINS, M.D.
Presented by the
Arkansas and Illinois Delegations

WHEREAS, Rufus B. Robins, M.D. of Camden, Arkansas, and more recently of Chicago, Illinois, died since the last session of this House of Delegates; and

WHEREAS, He served this House and America's physicians for many years as a Delegate, Trustee, Vice President, and also as President of the Arkansas Medical Society; and

WHEREAS, Doctor Robins not only served his profession, but he also willingly devoted his talents and efforts to the welfare of his community, state, and nation; therefore be it

RESOLVED, That the House of Delegates of the American Medical Association express its deep appreciation for Doctor Robins' many valuable services; and be it further

RESOLVED, That the sympathy of the American Medical Association be extended to Mrs. Robins and his family, along with a suitable copy of this resolution.

Adopted Unanimously by
AMA House of Delegates
December 2, 1970
Boston, Massachusetts

State Auxiliary President Mrs. Lynn Harris has met with four county auxiliaries during February and March. After visiting in Miller-Bowie, Pope-Yell, Jefferson, and Clark Counties, Mrs. Harris has met with seventeen local auxiliaries during her term of office.

Dr. Wilburn Marion Hamilton

Dr. Wilburn Marion Hamilton of Little Rock died January 9, 1971 at the age of 52.

A native of Dover, Dr. Hamilton attended Arkansas Tech and graduated from the University of Arkansas School of Medicine in 1943. After serving in the Army Medical Corps during World War II, he began practice in Little Rock in 1950.

Dr. Hamilton was a member of the Pulaski County and Arkansas Medical Societies and the American Medical Association.

Survivors include his wife, Mrs. Mary Ellis Hamilton, and two sons.

* * *

Dr. John T. Gray

Dr. John T. Gray of Jonesboro died January 21, 1971 at the age of 69. A native of Hazen, Dr. Gray graduated from the former Little Rock College and from the University of Arkansas School of Medicine in 1928.

He was a member of the Craighead-Poinsett County Medical Society, Arkansas Medical Society, the American Medical Association, Southern Medical Society and the Mid-South Medical Society.

Survivors include his wife, Mrs. Nan Gray, and one son.

Courses Of Special Interest To Internists

The University of Colorado School of Medicine announces that a three-day symposium in the management and care of respiratory insufficiency will be held in Denver from April 21-23, 1971. Further information can be obtained by writing:

The Office of Postgraduate Medical Education
University of Colorado School of Medicine
4200 East Ninth Avenue
Denver, Coolrado 80220

Stiff-Man Syndrome and Encephalomyelitis

S. Kasperek and S. Zebrowski (Silesian Academy of Medicine, Zabrze, Poland)
Arch Neurol 24:22-36 (Jan) 1971

A 49-year-old woman was affected by progressive stiffness of proximal limb muscles, with excruciating spasms set off by external stimuli, but showed no signs of corticospinal tract disease. These manifestations have been described previously as the "stiff-man syndrome" (SMS). Unlike earlier cases, this patient had early symptoms suggesting peripheral neuropathy and later, gaze palsies and loss of reflexes but no other signs of neural disorder. Electromyographic signs of continuous motor activity were similar to other cases of SMS. The patient died 11 months after the onset of stiffness. A tautopsy there was evidence of subacute encephalomyelitis, affecting predominantly the lower brain stem and spinal cord, in a pattern compatible with selective affinity for inhibitory neurons. There was also demyelination of the posterior funiculi, spinocerebellar tracts, medial lemnisci, and posterior longitudinal tracts. The nature of the lesions suggests a viral infection. These lesions have not been found in prior cases of SMS, perhaps because none of them had been examined so early in the course.

COUNCIL MINUTES

January 31, 1971

The Council of the Arkansas Medical Society met at 12:00 noon on Sunday, January 31, 1971, in the Sculpture Court of the Sam Peck Hotel, Little Rock.

Present were: Long, Shuffield, Hawkins, Saltzman, Raney, P. Gray, Edwards, D. Gray, Irwin, Lazenby, Wynne, Duzan, Harris, Bethel, Orr, Kolb, Henry, Kirby, Koenig, Whittaker, Hyatt, Ellis, Fowler, Wilkins, Townsend, Smith, Edgar Easley, Winston Shorey, C. W. Silverblatt, Jack Wilson, John Trieschmann, George Mitchell, Mr. Warren, Mr. Paul Harris, Mr. Berry, Mr. Schaefer, and Miss Richmond.

I. Upon the motion of Edwards and Wynne, the Council accepted and approved the annual report of audit of the State Medical Board.

II. In preparation for the White House Conference on Aging, the Council voted (upon the motion of Saltzman and Edwards) to ask the chairman of the Committee on Aging to represent the Arkansas Medical Society at the Conference on Aging March 21st in Chicago and designated the Committee on Aging to represent the Society at the State level.

III. After discussion, the Council approved the proposed budget for 1971 as presented by the Budget Committee (motion by Saltzman and Orr).

IV. The Council approved travel expenses for John Miller to attend a conference on Medicine and Religion to be held in Chicago on February 13th.

V. The Council authorized the sending of five official representatives to the AMPAC meeting in Washington March 13th and 14th.

VI. The Council considered a request by Dr. Kerrison Juniper, Jr., for $840 for the purchase of equipment for use in a high school educational program. After discussion, the Council directed that the request be referred to the Health Careers Council for whatever action it deemed appropriate.

VII. A. Mr. Eugene Warren apprised the Council of the osteopaths' attempt to gain the privilege of practicing unlimited medicine through House Bill 225 by Hayes of Randolph County. Mr. Warren warned that a prompt reaction from the Medical Society would be necessary to prevent passage of HB 225.

B. Mr. Warren further explained that Senate Bill 180 by Howell of Pulaski County had been filed at the request of the Medical Society. SB 180 would allow osteopaths to practice in the State after a one-year educational program to improve their level of skill. This and other provisions of SB 180 are in accordance with a previous agreement made between representatives of the medical profession and representatives of the osteopaths.

VIII. Chairman Long and members discussed the proliferation of guests at Council meetings. Mr. Warren warned that the presence of guests — even that of other members of the Medical Society — endangered the privileged status of discussions held at the meetings. The chairman announced that before guests are invited to the meeting, such invitations should be cleared with either the chairman or with the Executive Vice President. With the agreement of those present, Chairman Long announced that he would make a practice of calling an executive session of the Council at the end of each meeting to consider any matters which members might have on their minds.

IX. A. Dr. John Trieschmann presented a report of the Committee on Maternal

and Child Welfare which recommended licensing and inspection of child day care facilities by the State Health Department. By motion of Koenig and Duzan, the Council endorsed the report.

B. The Council received for information Dr. Trieschmann's discussion of Child Abuse laws.

X. The Council was asked to arrive at a policy on the AMA Medicredit Plan for national health insurance. After some discussion, the Council requested that an AMA representative be invited to come to a Council meeting to explain Medicredit.

XI. Dr. Orr discussed Senate Bill 176 to license medical technologists. Dr. Orr explained that this was not the bill that had been approved by the Council and urged the Medical Society to oppose it. He stated that the pathologists had decided also not to work for the adoption of any other bill on the subject at this time, and requested the Medical Society to adopt a similar policy. Upon motion of Orr and Duzan, the Council agreed.

XII. Upon the motion of Irwin and Kolb, the Council received for information the Union County Medical Society resolution announcing that Society's decision not to pay AMA dues until the AMA explains its policies which seem to be at odds with the policies of Union County.

XIII. By general agreement, the Council voted to contribute $500 to Ark-Pac for educational purposes.

XIV. Dr. Charles Wilkins presented a statement which had been approved by the PSRO condemning the refusal of the Department of Health, Education and Welfare to advise a physician as to what he could charge under the restrictions to the usual, customary and reasonable fee arrangement. The Council approved the statement and directed that a copy of the statement be sent to all members of the Arkansas Medical Society. The Council also directed that the ideas expressed in the statement be incorporated in a letter to be sent to the Arkansas Congressmen. Copy of the statement attached as part of these minutes.

XV. The Council elected Dr. John V. Busby to represent psychiatry on the PSRO, succeeding Dr. Frank M. Westerfield, resigned.

XVI. After hearing a discussion by Dean Winston Shorey and Lewis Hyatt on communications between the Medical School and the Medical Society, the Council requested the chairman to appoint, in consultation with the Executive Committee, a committee to meet with the dean and members of the faculty of the Medical Center to discuss such problems as the members of the committee feel are indicated.

XVII. The chairman called the Council into executive session, excusing the guests. After discussion of the continuing excellent performance and assumption of more responsibilities by Miss Leah Richmond of the headquarters office, the Council voted unanimously to recognize these accomplishments and continuing improvement by changing her title from Administrative Assistant to Assistant Executive Vice President.

The meeting adjourned at 3:00 P.M.

APPROVED: C. C. Long, M.D.
Chairman of the Council

January 25, 1971

TO: THE COUNCIL OF THE ARKANSAS MEDICAL SOCIETY

FROM: The Professional Services Review Organization

Effective January 1, 1971, the Department of Health, Education and Welfare has arbitrarily and unilaterally announced lowering of the ceiling on physicians' fees from the 83rd and 75th percentile level using 1969 as the basis for determining customary fees. The President of the American Medical Association has stated, "Nowhere in the law is there justification for this

discriminatory action." (American Medical News, January 18, 1971)

At the same time HEW has announced a rise in cost to the recipient of Medicare Part B, "Due to rise in physicians' fees", in spite of the fact that physicians' fees have been frozen since 1969.

The above is beyond the province of the PSRO; however, it is background information for a matter which the PSRO wishes to bring to the attention of the Council.

With the advent of Medicare, the physician was given his choice of two methods of collecting his fee — from the patient (with the patient collecting from the carrier), or by assignment with the physician collecting 80 percent of his fee directly from the Medicare carrier.

Many physicians accepted the latter course for three reasons: 1) Assured collection of fee, 2) The patient could often ill afford the outlay of cash and long wait for reimbursement, and 3) The carrier (Arkansas Blue Cross-Blue Shield) stated that marked difficulty was experienced in paying patient-submitted claims because of inability to get full information.

Although there have been problems, delays in payment, errors and misunderstandings, Arkansas Medicine has demonstrated its intent to cooperate in every possible way including helping the carrier to set up the system, urging its members to cooperate and furnishing a peer review organization.

Since most physicians furnished the carrier a schedule of usual and customary fees, it is to be assumed that with the reduction in fee ceiling, HEW would instruct the carrier to furnish each cooperating physician with a new schedule of *his* allowable fees.

HEW, citing some obscure provision of the Medicare Law, has instructed Arkansas Blue Cross-Blue Shield that they are *not allowed* to inform the physician of his new approved fee *whether* or *not* he is above the 75th percentile. He can only be so informed when his claim is *disallowed* as *"more than the allowable charge."*

Thus, a physician accepting assignment does not know what fee he will be paid or the proportion to charge the patient. He faces implied accusation of overcharging and the possibility of additional expense and paperwork since he must refund to the patient anything in excess of 20 percent of the approved fee.

This action is so illogical and arbitrary that it can only be concluded to be intended to harass and place the physician on the defensive.

The Professional Services Review Organization recommends that the Council —

- Inform all Arkansas Medical Society members concerning this matter.
- Consider whether or not the Council should recommend against further acceptance of payment by assignment.
- Bring this matter to the attention of Arkansas Congressional Delegation.

/s/ C. F. Wilkins, Jr.
Chas. F. Wilkins, Jr., M.D.
Chairman, Professional Services
Review Organization

Total Pancreatectomy

W. H. ReMine et al (Mayo Clinic, Rochester, Minn 55901)

Ann Surg 172:595-604 (Oct) 1970

Pancreatectomy was performed on 36 patients during a 27-year period, with an operative mortality of 16.7% (six patients) and an overall five-year survival rate of 52.6% among those patients eligible for follow-up (11 of 19 patients). Twenty-three resections were performed for carcinoma, with an operative mortality of 21.7% (five patients). Seven of the 18 patients who survived operation were eligible for five-year follow-up; two of the seven lived five years or longer, and one is alive and well ten years after operation. Four patients lived more than four years after operation, and seven survived more than two years after operation. Ten patients were operated on for islet-cell tumor, with one surgical death. Eight of these patients lived five years or longer (88.9%), six are alive and well now, and one is alive and well 27½ years after total pancreatectomy was performed. Three patients with chronic pancreatitis had total extirpation of the pancreas. There were no operative deaths, and one patient lived eight years after surgery.

TUBERCULOSIS ABSTRACTS

Sponsored by Arkansas Tuberculosis and Respiratory Disease Association

TREATMENT OF CHRONIC PULMONARY HISTOPLASMOSIS

Amphotericin B was found to be the most effective therapy for reducing the number of relapses and deaths due to pulmonary histoplasmosis. A total dose of 35 mg per kg. body weight was required to reduce the case fatality ratio significantly.

Four-hundred-eight untreated and treated patients with chronic pulmonary histoplasmosis have been followed for seven years. The purpose was to determine how the untreated patients fared in contrast with patients who had undergone chemotherapy with amphotericin B, surgery, or both.

Of the 408 sanatorium patients in this study, 238 were treated with amphotericin B alone (Group A); 100 were not treated (Group B); 43 were treated with chemotherapy and pulmonary surgery (Group C), and 27 with surgery alone (Group D).

Diagnosis of histoplasmosis was verified by isolation of *Histoplasma capsulatum* from sputum or other specimens, or by examination of subcultures of the fungus. Some cases were verified by visualization of the fungus in tissue preparations.

The final decision on chemotherapy and surgery was left to the attending physician. In Group A the total dosage of amphotericin B ranged from 250 to 5900 mg (3 to 108 mg per kg. body weight).

After a patient was discharged, an attempt was made to obtain follow-up information on the progression or regression of disease at six-month intervals for a year and at yearly intervals thereafter. Death certificates, autopsy reports, or both were obtained on all patients who died.

In this study, relapse was defined as the reappearance of *H. capsulatum* in sputum cultures, or a worsening of the chest film and symptoms after termination of therapy without other apparent cause. Treatment failure was defined as the persistence of the organism in cultures throughout and after therapy. In Group A there were three such treatment failures of whom two died of respiratory insufficiency 20 to 74 months after the start of therapy. The third was alive at the end of 120 months of follow-up, although his chest film showed worsening of his disease.

MORTALITY AND MORBIDITY

At the end of the fifth year after initiation of chemotherapy, 28% of the patients in Group A had died; 15% had relapsed. By comparison, 50% of the untreated patients in Group B had died five years after diagnosis; another 18% had regressed.

In Groups A and B, death was directly related to the age of the patient at the time of diagnosis.

Mortality was inversely related to the dose of amphotericin B in Group A (p equal to 0.05). Significantly more patients receiving a total dose of less than 35 mg per kg. of body weight of amphotericin B died (39%) than those receiving more than 35 mg per kg. (26%) (p [chi square] less than 0.05). There were no deaths in Group A before therapy was completed.

Relapse in Group A and surgical Groups C and D was inversely related to duration of follow-up, with most relapses occurring early in the follow-up period. In the surgical Groups C and D, neither drugs nor the amount of lung removed appeared to have any bearing on the death or relapse rates. Surgical patients had a significantly higher incidence of unilateral disease.

J. D. Parker, M.D.; G. A. Sarosi, M.D.; I. L. Doto, M.A.; R. E. Bailey, M.S., and F. E. Tosh, M.D. *The New England Journal of Medicine*, July 30, 1970 (Vol. 283, No. 5).

Seven of the 25 relapsed patients treated with amphotericin B, surgery, or both, died. Eight of the 25 relapsed patients not treated or treated with investigational drugs, died.

CHEMOTHERAPY VS. SURGERY

Although an occasional patient has what appears to be a self-limiting form of the disease which regresses with bed rest, most are afflicted with a more severe progressive disease. At least this was true of the sanatorium population in this study.

Taking into account the grim prognosis of untreated, severe, progressive histoplasmosis, as unfolded in this and other studies, it seems wise to treat all chronic pulmonary histoplasmosis patients with amphotericin B.

Regarding dosage, this study indicates that a total dose of 35 mg per kg. of body weight is required to decrease the fatality ratio significantly.

The role of surgery in the treatment of chronic pulmonary histoplasmosis is uncertain. It is often necessary for diagnosis and certainly has a place in the treatment of the right middle-lobe syndrome and symptomatic bronchiectasis due to histoplasmosis.

The controversy over surgery concerns its use in the treatment of residual cavitation. A recent article stated that indications for surgery in chronic pulmonary histoplasmosis are the same as for cavitary tuberculosis — that is, persistent cavitation over 4 cm. in diameter or persistent cavitation without improvement.

Data in the present study show that surgical therapy is no more effective than chemotherapy alone in reducing the number of relapses and deaths. Indeed, when the age of the patient and the extent of his disease was taken into account, it proved to be no more effective than bed rest in reducing mortality.

Furthermore, in the study group, cavitation was not found to be related to relapse or to death. Too strong a stand on this issue cannot be taken, however, because of the small size of the surgical groups, and also because cavitation was determined by PA chest film only. A prospective randomized study using tomograms might resolve the issue.

The possibility of postoperative complications must be taken into consideration in surgical therapy. In the present study, 15 surgically treated patients (21%) had postoperative complications.

PRE- AND POSTOPERATIVE THERAPY

Although preoperative amphotericin B has been advocated to prevent complications, data from this study do not support the recommendation — possibly because of the small number of cases analyzed. However, the strong inverse relationship between the drug and the relapse or death ratio suggests that amphotericin B should be administered when pulmonary surgery is performed.

Endocrine Function in Male and Female Homosexuals

J. A. Loraine et al (Clinical Endocrinology Unit, 2 Forrest Rd, Edinburgh)

Brit Med J 4:406-408 (Nov 14) 1970

Serial assays of hormones and their metabolites are reported in the urine of three male and four female homosexuals. In the former group urinary testosterone levels were abnormally low in the two subjects who practiced exclusive homosexuality, and were within normal range in the third who had both homosexual and heterosexual relationships. In the women assays were generally performed throughout one menstrual cycle; in three, the pattern of hormone excretion was ovulatory in character, while in the fourth evidence for ovulation was equivocal. Levels of testosterone and luteinizing hormone were elevated in the female homosexuals, while those for estrogens, particularly esterone, were below the range for normal heterosexual subjects during their reproductive life. Readings of follicle-stimulating hormone and pregnanediol were normal in three women. The data reported are in keeping with the view that abnormalities in endocrine function can occur in both male and female homosexuals.

ANNUAL MEETING PROGRAM

April 25–28, 1971 Hot Springs

CONVENTION OFFICIALS

GENERAL CHAIRMAN: Winston K. Shorey, M.D., Little Rock

PROGRAM COMMITTEE:

Joseph L. Rosenzweig, M.D., Hot Springs

John McCollough Smith, M.D., Little Rock

Art B. Martin, M.D., Fort Smith

Joseph S. Robinette, M.D., Pine Bluff

Betty A. Lowe, M.D., Texarkana

A. S. Koenig, M.D., Fort Smith

Wright Hawkins, M.D., Fort Smith

Dwight W. Gray, M.D., Marianna

Gilbert S. Campbell, M.D., Little Rock

W. T. Dungan, M.D., Little Rock

SCIENTIFIC EXHIBITS CHAIRMAN: Charles W. Logan, M.D., Little Rock

GOLF TOURNAMENT CHAIRMAN: H. L. Wineland, M.D., Pine Bulff

MEMORIAL SERVICE CHAIRMAN: C. Lewis Hyatt, M.D., Monticello

Digest of Events

REGISTRATION

The registration desk will be located on the Mezzanine of the Arlington Hotel and will be open as follows:

Sunday, April 25	8:00 A.M. to 5:00 P.M.
Monday, April 26	8:00 A.M. to 5:00 P.M.
Tuesday, April 27	8:00 A.M. to 5:00 P.M.
Wednesday, April 28	8:00 A.M. to 12:00 Noon

Registration cards and badges will be prepared in advance for the officers of the Arkansas Medical Society and for the county society delegates. Delegates are requested to present credentials in proper form when registering.

All members and visitors are required to register, as admission to all sessions will be by badge only. Bring your 1971 membership card to facilitate registration.

There will be a $5.00 registration fee for non-member physicians. Members of the faculty of the University of Arkansas School of Medicine will be guests of the Society for the General Session program.

Tickets for the Tuesday night cocktail party and banquet may be purchased at the registration desk.

TELEPHONE SERVICE

A special convention telephone will be installed at the Society's registration desk. The telephone number will be 624-7284. Give this number to your office personnel so that they may contact you in case of an emergency.

MEETINGS OF THE COUNCIL

The Council of the Arkansas Medical Society will meet as follows:

Sunday, April 25	10:00 A.M.
Monday, April 26	7:30 A.M.
Tuesday, April 27	7:30 A.M.
Wednesday, April 28	9:00 A.M.
Wednesday, April 28	Immediately following the adjournment of the House of Delegates (Brief re-organizational meeting and group photograph of new officers)

The voting members of the Council are: the councilors, the president, the first vice president, president-elect, secretary and treasurer. The speaker, vice speaker, and past presidents are members ex-officio without vote.

HOUSE OF DELEGATES

The opening session of the House of Delegates of the Arkansas Medical Society will be called to order at 1:00 P.M. on Sunday, April 25, in Room "C" of the Conference Center, Arlington Hotel.

The closing session and election of officers will begin at 10:00 A.M. on Wednesday, April 28, in the same room.

All items of business will be referred by the Speaker of the House of Delegates to three reference committees. Open hearings on all resolutions and reports will begin at 3:30 P.M. on Sunday, April 25. Any member of the Arkansas Medical Society is welcome to attend the meetings of the reference committees and to express his views on the various reports, resolutions, etc. After the open hearings the reference committees will go into executive session for the purpose of preparing reports and recommendations to the House of Delegates.

All items of business to be considered by the House must either be printed in the March issue of the Journal or submitted to the headquarters office in writing twenty days prior to the meeting. Any new business proposed during sessions of the House must have two-thirds vote of attending delegates for introduction.

SCIENTIFIC SESSIONS

The scientific program of the annual meeting will be provided by the faculty of the University of Arkansas School of Medicine, supplemented by out-of-State guest speakers of several specialty group meetings. The scientific program will be presented on Monday and until noon on Tuesday. The theme will be "Current Management of Common Problems".

Section and specialty group meetings will be held on Tuesday afternoon. The Association of Tumor Clinic Staff Members in Arkansas will hold a luncheon meeting on Monday.

The complete program for the annual meeting begins on page 351.

TECHNICAL AND SCIENTIFIC EXHIBITS

Thirty-eight displays by firms whose products and services are of interest to Arkansas physicians will be housed in the Conference Center of the Hotel on the Mezzanine floor level.

In addition, there will be scientific and industrial exhibits in the adjacent area of the Conference Center. A complete list of the scientific and technical exhibits appears on pages 362 to 364. Exhibit hours are from 12:00 noon to 5:00 P.M. on Sunday; 8:00 A.M. to 5:00 P.M. on Monday and Tuesday; and from 8:00 A.M. to 10:00 A.M. on Wednesday.

FREE COFFEE

The Arkansas State Medical Assistants Society will serve coffee in the exhibit area of the Conference Center. Members are urged to visit the medical assistants for a cup of coffee and discussion of the medical assistants' organization.

SUNDAY EVENING RECEPTION

The Council will host a reception for all members, wives, and guests of the Arkansas Medical Society at 6:30 P.M. on Sunday, April 25th, in the Arlington Hotel. All members are encouraged to attend and become better acquainted with the officers of the Society.

GOLF TOURNAMENT

The annual golf tournament will be played on one day only at the Belvedere Country Club in Hot Springs. The tournament will be held on Monday, April 26th, weather permitting, or on Tuesday, the 27th. Each participant will be required to pay for green fees and carts.

Trophies will be presented at the Inaugural Banquet on Tuesday night to the true-low gross golfer and to the first runner-up.

At the Monday night party at the Vapors, prizes will be awarded for the "blind bogey tournament". There will be a drawing to name winners. Golfers with scores equal or nearest to the numbers drawn will be winners. Scores will be determined by the Calaway System.

Dr. H. L. Wineland, Chairman, Golf Tournment Committee; assisted by Dr. E. Driver Rowland.

CLASS REUNIONS

UNIVERSITY OF ARKANSAS SCHOOL OF MEDICINE

CLASS OF 1941

Dr. Harold Goldberg of Gary, Indiana, has announced that there will be a thirty-year reunion of the University of Arkansas School of Medicine's Class of 1941 on Saturday night, April 24th. The reunion dinner will be at the Royale Vista Inn, Hot Springs, beginning at 6:00 P.M.

CLASS OF 1951

A reunion of the University of Arkansas School of Medicine, Class of 1951, is planned for Monday, April 26, at the Vapors Restaurant. For additional information or to make reservations, please contact Dr. Albert R. Hammon, Park and Circle Drive, Harrison, Arkansas 72601, telephone 501-365-3746.

SENIOR MEDICAL STUDENT DAY AT THE ANNUAL SESSION

Senior medical students will be invited to attend the Scientific Session on Monday, April 26th.

A 12:00 luncheon, to be hosted by the Arkansas Medical Society, is planned for the students. Members of the Council will serve as table hosts.

Society members from areas of the State which are in critical need of additional physicians are invited to attend the luncheon so that they can discuss with the students their plans for entering practice and encourage them to consider future practice in these areas.

ARKANSAS STATE MEDICAL BOARD

The Arkansas State Medical Board will meet at 1:00 P.M. on Monday, April 26th, in the Mars Room (Fourth Floor Tower Suite) of the Arlington.

FIFTY YEAR CLUB BREAKFAST

The Society will host a breakfast for members of the Fifty Year Club at 7:30 A.M. on Tuesday, April 27, in the Arlington Hotel. Members of the Fifty Year Club may make reservations for the breakfast at the Society's convention registration desk.

PAST PRESIDENTS' BREAKFAST

The traditional breakfast for former presidents of the Arkansas Medical Society will be held at 7:30 A.M. on Wednesday, April 28th, in the Arlington Hotel.

MEMORIAL SERVICE

A joint Society-Auxiliary Memorial Service will be held on Tuesday morning, April 27th, at 11:30 A.M., in the Ballroom of the Arlington Hotel.

MONDAY EVENING PARTY

Arkansas Blue Cross-Blue Shield will host a cocktail party on Monday evening for all members of the Arkansas Medical Society and special guests. The party will be held at the Vapors Supper Club, beginning at 6:00 P.M.

Following the cocktail party, members of the Society may enjoy dinner at the Vapors. Dinner will be on a dutch-treat basis, with members ordering individually from the club menu.

TUESDAY EVENING COCKTAIL PARTY

A cocktail party will precede the Inaugural Banquet on Tuesday evening, beginning at 6:00 P.M. The party will be held at pool side if weather permits. Tickets will be on sale at the convention registration desk.

PRESIDENT'S INAUGURAL BANQUET

The social highlight of the 1971 annual session will be the President's Inaugural Banquet on Tuesday evening, April 27th, in the Crystal Ballroom of the Arlington Hotel, beginning at 7:00 P.M.

The Society President, Dr. Jack W. Kennedy, will act as master of ceremonies.

Dr. Stanley Applegate will be installed as president for 1971-72.

Outstanding entertainment has been arranged for the banquet through the courtesy of Mountain Valley Water Company. The incomparable Hildegarde will present a show which she has recently presented in famous supper clubs.

The Arlington Hotel orchestra will play for dancing in the Hotel Ballroom following the banquet.

Tickets for the banquet will be available at the Society's convention registration desk.

Scientific Program

Monday Morning, April 26, 1971

Room "C", Conference Center
Arlington Hotel
(enter through exhibit area)

Wright Hawkins, M.D., First Vice President, Presiding

8:15 Film: "The Team Physician"

9:00 "Management of the Hyperactive Child"
John E. Peters, M.D.
Professor and Chairman
Division of Child and Adolescent Psychiatry
University of Arkansas School of Medicine

Misunderstanding and considerable controversy have occurred regarding the use of drugs in the management of hyperactive children. Dr. Peters will discuss the total care of these children, including the use of drugs.

9:30 "The Use of L DOPA in the Treatment of Parkinsonism"
Dennis Lucy, M.D.
Associate Professor and Chairman, Division of Neurology
University of Arkansas School of Medicine

L DOPA is the most effective therapy available for the treatment of Parkinsonism. However, the frequency and severity of its undesirable side effects are very serious considerations in its use. Dr. Lucy will discuss both the beneficial and undesirable effects of its administration.

10:00 "Management of Acute Myocardial Infarction"
Jack L. Davis, M.D.
Assistant Professor of Medicine
University of Arkansas School of Medicine

Dr. Davis is Director of the Coronary Care Unit at the Hospital of the University of Arkansas. He has gained a well deserved reputation for providing an excellent program for continuing education of physicians in the care of patients with myocardial infarction, this program being sponsored by the Arkansas Regional Medical Program.

10:30 Intermission — Visit Exhibits

11:00 "Medical and Legal Problems in the Management of Diabetes"
Discussion Panel
Coy D. Fitch, M.D.
Associate Professor of Internal Medicine and Biochemistry
St. Louis University School of Medicine

Sidney S. McMath, LL.B., LL.D. (Honorary Baldwin-Wallace)
Former Governor, State of Arkansas
Major General, U.S. Marine Corps Reserve
Practicing Attorney, Little Rock

Louis L. Sanders, M.D.
Associate Professor of Medicine
University of Arkansas School of Medicine

James O. Wynn, M.D.
Professor of Medicine, Head of Section on Endocrinology
University of Arkansas School of Medicine

James L. Dennis, M.D.
Vice President for Health Sciences
University of Arkansas Medical Center
Moderator

During the past year, reports of long term studies in the therapy of diabetes have raised serious questions regarding the use of oral hypoglycemic agents. A physician is faced not only with the problem of how best to manage his patients, but also with the medical-legal dilemma of utilizing therapeutic agents that are questioned by professional and governmental authority. This discussion group will address itself to these problems.

Monday Afternoon, April 26, 1971

Room "C", Conference Center

Porter R. Rodgers, Jr., M.D., Second Vice President, Presiding

1:30 "Detection and Management of Common Ocular Problems"
F. T. Fraunfelder, M.D.
Associate Professor and Chairman
Department of Ophthalmology
University of Arkansas School of Medicine

This presentation will be concerned with diseases of the eye, many of which require early detection to procure best results from treatment. Dr. Fraunfelder will discuss both early diagnosis of these diseases and expectations for benefit from appropriate treatment.

2:00 "Current Management of Common Problems of the Skin"
G. Thomas Jansen, M.D.
Professor and Chairman, Division of Dermatology
University of Arkansas School of Medicine

Dr. Jansen will discuss the diagnosis and treatment of diseases of the skin frequently encountered in practice. His presentation will be oriented toward providing the family physician with information helpful in managing these diseases.

2:30 Intermission — Visit Exhibits

3:00 "Therapy of Tuberculosis" — Discussion Panel
Robert S. Abernathy, M.D.
Professor and Chairman, Department of Medicine
University of Arkansas School of Medicine

W. Duane Jones, M.D.
Medical Director
State Sanatorium

Donald L. Miller, M.D.
Chest Clinic Consultant, State Health Department
Private Practice, Pine Bluff

Robert L. Mayock, M.D.
Professor of Medicine and Chief of Pulmonary Disease Section
University of Pennsylvania School of Medicine, Philadelphia

Winston K. Shorey, M.D.
Dean, University of Arkansas School of Medicine
Moderator

The State of Arkansas currently is involved in decision making regarding the treatment and control of tuberculosis. This discussion panel will focus upon current concepts in the care of patients with tuberculosis.

4:00 "Management of Pain"

Ferdinand E. Greifenstein, M.D.
Professor and Chairman
Division of Anesthesiology
University of Arkansas School of Medicine

Stevenson Flanigan, M.D.
Professor and Chairman
Division of Neurosurgery
University of Arkansas School of Medicine

Pain resulting from a variety of causes can be a sufficient problem in the management of a patient that special therapy for it is warranted in addition to treatment of the underlying disease entity. Dr. Greifenstein and Dr. Flanigan will discuss the utilization of several modalities available for the control of pain.

Tuesday Morning, April 27, 1971

Room "C", Conference Center

Rhys A. Williams, M.D., Third Vice President, Presiding

8:00 Film: "The Team Physician"

8:45 "What Constitutes Proper Resuscitation of the Severely Burned Patient?"

Fred T. Caldwell, M.D.
Professor of Surgery
University of Arkansas School of Medicine

Dr. Caldwell will discuss measures to be taken immediately when undertaking the care of a person who has suffered extensive burns. His presentation will include both the patient whose definitive management is handled locally and the one who is transported to another facility.

9:10 "Management of Toxemia of Pregnancy"
David L. Barclay, M.D.
Professor and Chairman, Department of Obstetrics-Gynecology
University of Arkansas School of Medicine

Dr. Barclay will discuss pre-natal care as a means of preventing toxemia of pregnancy, the warning signs and symptoms, and management of the syndrome when it occurs.

9:30 "Management of the Child with Recurrent Respiratory Infections"
Elliott F. Ellis, M.D.
Associate Professor of Pediatrics
University of Colorado School of Medicine
Chief of Pediatrics, National Jewish Hospital, Denver

Dr. Ellis is a recognized authority in the field of immunology and allergy. He brings an extensive experience both as a clinician and as an investigator to focus on this common problem in the care of children.

10:00 "Surgical Therapy of Rheumatoid Arthritis of the Hand"
Alfred B. Swanson, M.D.
Chief, Department of Orthopedic Surgery
Blodgett Memorial Hospital
Grand Rapids, Michigan

Dr. Swanson, who is internationally recognized as a leader in developing surgical therapy for rheumatoid arthritis, will discuss surgical procedures applicable to rheumatoid arthritis of the hand, the selection of patients for these procedures, and expectations for benefit to the patient.

10:30 "Anesthesiology for the Ambulatory Patient"
Charles S. Coakley, M.D.
Professor and Chairman, Department of Anesthesiology
George Washington University School of Medicine,
Washington, D.C.

Dr. Coakley is particularly interested in anesthesia for the ambulatory patient. His discussion will be concerned with anesthetic management of patients receiving surgical therapy on an out-patient basis.

11:00 "Infections of the Ear and Upper Respiratory Tract"
James B. Snow, Jr., M.D.
Professor and Chairman, Department of Otorhinolaryngology
University of Oklahoma School of Medicine, Oklahoma City

Dr. Snow will discuss appropriate and realistic management of infections of the ear and upper respiratory tract. His discussion will include use of antibiotics and other drugs from the practical viewpoint with regard to such factors as duration of therapy for effective results.

Related Meetings

ASSOCIATION OF TUMOR CLINIC STAFF MEMBERS IN ARKANSAS

The Association of Tumor Clinic Staff Members in Arkansas will have its annual luncheon meeting and Cancer Seminar beginning at 12:00 noon on Monday, April 26th, in the Mercury Room (Third Floor Tower Suite) of the Arlington Hotel. Thomas E. Bell, M.D., Association chairman, will preside.

SCIENTIFIC SESSION — CANCER SEMINAR

"Medullary Carcinoma of the Thyroid:
Clinical and Genetic Aspects"

Guest Speaker: C. Stratton Hill, Jr., M.D.
Assistant Internist, The University of Texas M. D. Anderson Hospital and Tumor Institute at Houston, Texas
Courtesy Medical Staff, Hermann Hospital, Houston, Texas
Squibb Senior Fellowship Award — 1966, Memorial Sloan-Kettering Cancer Center, New York, New York

Acceptable for Category II or elective one hour credit by American Academy of General Practice.

INTERNAL MEDICINE

The Arkansas Society of Internal Medicine will have a noon luncheon and business meeting with election of officers on Tuesday, April 27th, in the Arlington Hotel.

PEDIATRICS

The Arkansas Chapter of the American Academy of Pediatrics will have a luncheon and business meeting on Tuesday, April 27th, in the Arlington. Drs. Vida Gordon and Betty Lowe, Program Committee, have announced the following program:

12:30 P.M. - 2:00 P.M.	Luncheon and Business Meeting, Arkansas Chapter of the American Academy of Pediatrics W. T. Dungan, M.D., Chapter Chairman Associate Professor of Pediatrics, University of Arkansas Medical Center
2:00 P.M. - 5:00 P.M.	Panel Discussion — Jointly sponsored by Pediatrics and the Academy of General Practice All allergists and ENT specialists invited Moderator: Vida H. Gordon, M.D. Associate Professor of Pediatrics and Director, Pediatric Allergy Training Program Arkansas Medical Center Panelists:
2:00 P.M.	Elliott F. Ellis, M.D. Associate Professor of Pediatrics University of Colorado School of Medicine and Chief of Pediatrics, National Jewish Hospital, Denver, Colorado "Immunoglobulins and Their Relation to Allergic Disease"

2:15 P.M.	Robert N. McGrew, M.D. Assistant Professor and Head, Department of Otolaryngology Arkansas Medical Center "The Role of Sinuses, Tonsils, Adenoids in Allergic Disease"
2:30 P.M.	B. P. Briggs, M.D. Practicing Pediatrician, Little Rock, Arkansas "Asthmatic Bronchitis in Children: What Is It? How Is It Treated?" Role of infection in allergy with case presentations.
2:45 P.M. - 5:00 P.M.	Discussion and questions

RADIOLOGY

The Radiology Group will have a luncheon meeting on Tuesday, April 27th, at the Arlington Hotel. Dr. William J. Wilson, chairman and professor of the Department of Radiology at the University of Nebraska, will be the speaker for the scientific program. Dr. Wilson will speak on "Computer Aided Diagnosis in Diagnostic Radiology".

A business meeting is scheduled to follow the scientific program.

Dr. John W. Lane is program chairman.

EYE, EAR, NOSE AND THROAT SECTION

Simultaneous lectures will be held in separate rooms for (1) ophthalmology and (2) otorhinolaryngology. These lectures will begin at 9:00 A.M. on Tuesday, April 27, at the Arlington.

All members of the EENT Section will meet for a joint luncheon, beginning at noon.

EYE PROGRAM

"GC. Conjunctivitis"	Dr. Joe C. Parker, Little Rock, Arkansas
"Neuro-ophthalmology"	Dr. John S. Kennerdell Department of Ophthalmology University of Pittsburgh School of Medicine Pittsburgh, Pennsylvania
"Endophthalmitis"	Dr. Gaither Johnston, Jr., Little Rock, Arkansas
"Ultra-sounds"	Dr. John S. Kennerdell
"Recent Advances and Trends in Ophthalmology"	Dr. Morriss Henry, Fayetteville, Arkansas

ENT PROGRAM

"Current Trends in Otolaryngology"	Dr. James B. Snow, Jr. Professor and Chairman Department of Otorhinolaryngology University of Oklahoma School of Medicine Oklahoma City

(Dr. Snow speaks at 11:00 A.M. on the General Session Program.)

OBSTETRICS-GYNECOLOGY

There will be a luncheon meeting of the section on obstetrics and gynecology on Tuesday, April 27th, at the Arlington.

GENERAL PRACTICE

The Arkansas Academy of General Practice and the Arkansas Chapter, American Academy of Pediatrics are jointly sponsoring a panel discussion which will begin at 2:00 P.M., on Tuesday, April 27th, in the Arlington.

PANEL DISCUSSION

Moderator:
Vida H. Gordon, M.D.
Associate Professor of Pediatrics and Director,
Pediatric Allergy Training Program
Arkansas Medical Center

Panelists:

2:00 P.M.	Elliott F. Ellis, M.D. Associate Professor of Pediatrics, University of Colorado School of Medicine and Chief of Pediatrics, National Jewish Hospital, Denver, Colorado "Immunoglobulins and Their Relation to Allergic Disease"
2:15 P.M.	Robert N. McGrew, M.D. Assistant Professor and Head, Division of Otolaryngology Arkansas Medical Center "The Role of Sinuses, Tonsils, Adenoids in Allergic Disease"
2:30 P.M.	B. P. Briggs, M.D. Practicing Pediatrician, Little Rock, Arkansas "Asthmatic Bronchitis in Children: What Is It? How Is It Treated?" Role of infection in allergy with case presentations
2:45 - 5:00 P.M.	Discussion and questions

SURGERY

The Arkansas Chapter, American College of Surgeons, will meet for a luncheon beginning at 12:00 noon on Tuesday, April 27th, in the Arlington Hotel. Guest speaker will be Bernard W. Thompson, M.D., Associate Professor of Surgery, University of Arkansas School of Medicine. Dr. Thompson will speak on "Liver Trauma".

Memorial Service

Joint Society-Auxiliary Service, Ballroom, Arlington Hotel

11:30 A.M., Tuesday, April 27

Presiding: Jack Kennedy, M.D., President, Arkansas Medical Society

Invocation: Wayne Lazenby, M.D., Dumas

Reading of names of deceased members of the Society: Dr. Kennedy

Reading of names of deceased members of the Auxiliary: Mrs. Lynn Harris, President, Woman's Auxiliary to the Arkansas Medical Society

Memorial Address: C. Lewis Hyatt, M.D., Monticello

"Angels, Ever Bright and Fair" ..... F. F. Handel
Mrs. Paul Gray, soprano
Mr. Herman Hess, accompanist

IN MEMORIAM

Goree Bisco, M.D., Dumas
William H. Breit, M.D., Harrison
Richard J. Brightwell, M.D., Fayetteville
W. A. Fowler, M.D., Fayetteville
William H. Gibbons, M.D., Ozark
John T. Gray, M.D., Jonesboro
Wilburn M. Hamilton, M.D., Little Rock
Glen M. Holmes, M.D., Little Rock
Evan G. Houston, M.D., Magnolia
Paul H. Jeffery, Batesville
Evan J. Kurts, West Helena
Hugh J. Mayfield, El Dorado
Fay B. Millwee, M.D., McCrory
Joe W. Reid, M.D., Arkadelphia
R. B. Robins, M.D., Chicago
J. M. Robinson, M.D., Little Rock
H. King Wade, Sr., M.D., Hot Springs

Benediction: Raymond Irwin, M.D., Pine Bluff

House of Delegates Meeting

FIRST MEETING
1:00 P.M., Sunday, April 25, 1971
Room "C", Conference Center, Arlington Hotel

Amail Chudy, M.D., Speaker of the House of Delegates, Presiding

1. Call to Order
2. Roll Call of Delegates
3. Report of Credentials Committee
4. Adoption of minutes of the 94th Annual Session, as published in the June 1970 issue of the Journal of the Arkansas Medical Society.
6. Introduction of Guests
7. Address by President of the Arkansas Medical Society, Jack Kennedy, M.D., Little Rock, Arkansas.
8. Report from Chairman of the Council, C. C. Long, M.D., on meetings held since publication of annual report of Council in March issue of the Journal of the Arkansas Medical Society.
9. Reports of Committees
   Reports as published in March Journal may be amended by Committee Chairman. All reports will be referred to the Reference Committees.
10. New Business
    (Chapter XI, Section 2, of the Society Constitution pertaining to business of the House is as follows:
    All items expected to be considered at the Annual Meeting of the House of Delegates of this Society must be printed in the Jour-

nal of the Arkansas Medical Society in the month preceding the Annual Meeting. All resolutions to be submitted to the House of Delegates at the Annual Meeting must be received in the office of the Executive Vice President twenty days prior to said meeting. Any new business proposed during the first session of the House of Delegates of this Society must have a two-thirds majority of the attending delegates voting for such introduction into this Session. Any new resolutions or other new business proposed for introduction to this House of Delegates after the first session in each Annual Meeting must have two-thirds consent of attending delegates before its introduction.)

11. Announcement of Vacancies on State Boards
12. Selection of Nominating Committee
13. Adjournment

FINAL MEETING

10:00 A.M., Wednesday, April 28, 1971

Room "C", Conference Center

1. Call to Order
2. Report of Nominating Committee
3. Elections
   Society Officers:
   President-elect
   First Vice President
   Second Vice President
   Third Vice President
   Treasurer
   Secretary
   Speaker of the House of Delegates
   Vice Speaker of the House of Delegates
   Councilors (one from each of the ten councilor districts)
   Councilors whose terms expire are:
   1. Eldon Fairley, Osceola
   2. Paul Gray, Batesville
   3. Dwight W. Gray, Marianna
   4. Raymond Irwin, Pine Bluff
   5. Kenneth R. Duzan, El Dorado
   6. Karlton Kemp, Texarkana
   7. James C. Bethel, Benton
   8. W. Payton Kolb, Little Rock
   9. Morriss Henry, Fayetteville
   10. C. C. Long, Ozark
   American Medical Association Delegates:
   Delegate to the American Medical Association House of Delegates (Term of Purcell Smith, M.D., expires December 31, 1971)
   Alternate Delegate to the American Medical Association House of Delegates (Term of T. E. Townsend, M.D., expires December 31, 1971)
   State Board Position:
   Member-At-Large Position on the Arkansas State Board of Health (Term of William S. Orr, Jr., M.D., Little Rock, expires December 31, 1971)
4. Election to fill vacancies on State Board of Health (Congressional District Positions)
5. Reports of Reference Committees
6. Supplemental Report of Council
7. New Business
   Any new resolution or other new business proposed for introduction to this House of Delegates after the first session in each annual meeting must have two-thirds consent of attending delegates before its introduction.
8. Adjournment

REFERENCE COMMITTEES

Reference Committees appointed by the Speaker of the House of Delegates will hold open hearings to discuss the committee reports published in the March Journal, as well as any supplemental reports and resolutions referred to them during the first meeting of the House of Delegates on Sunday, April 25th. All members are urged to participate in the discussion at the meetings. The committees will meet at 3:30 P.M. on Sunday, April 25, in the Arlington Hotel.

Members of the committees are:

Reference Committee No. 1:

Carl Williams, M.D., Fort Smith, Chairman
Dwight W. Gray, M.D., Marianna
James R. Weber, M.D., Jacksonville
Jacob P. Ellis, M.D., El Dorado

Reference Committee No. 2:
Frank Padberg, M.D., Little Rock, Chairman
Bascom P. Raney, M.D., Jonesboro
T. E. Townsend, M.D., Pine Bluff
C. Randolph Ellis, M.D., Malvern

Reference Committee No. 3:
Ben N. Saltzman, M.D., Mountain Home, Chairman
F. R. Buchanan, M.D., Little Rock
H. King Wade, Jr., M.D., Hot Springs
G. Thomas Jansen, M.D., Little Rock

STATE BOARD VACANCIES

Arkansas State Board of Health

A vacancy occurs in the Third and Sixth Congressional Districts, the counties of which are listed below. Members from these counties are urged to meet in the Arlington Hotel immediately following adjournment of the House of Delegates meeting on Sunday, April 25, to vote for nominees. Nominations should be reported to the convention registration desk. There must be three nominees for each vacancy.

Third District —
Counties in District: Baxter, Benton, Boone, Carroll, Crawford, Franklin, Johnson, Logan, Madison, Marion, Newton, Scott, Searcy, Sebastian, Van Buren, and Washington.

Present Member:
John W. Dorman, M.D., Springdale, term expires December 31, 1971, eligible for re-appointment.

Sixth District —
Counties in District: Arkansas, Chicot, Cleveland, Dallas, Desha, Drew, Garland, Grant, Hot Spring, Jefferson, Lincoln, Lonoke, and Saline.

Present Member:
C. Lewis Hyatt, M.D., Monticello, term expires December 31, 1971, eligible for re-appointment.

A vacancy also exists in the *Member-at-Large* position on the Arkansas State Board of Health. Dr. William S. Orr, Jr., of Little Rock, is currently serving a term which expires December 31, 1971. Nominations for this position will be made through the Society's Nominating Committee.

Woman's Auxiliary

The 47th Annual Session of the Woman's Auxiliary to the Arkansas Medical Society will be held April 25, 26, and 27, 1971, in the Arlington Hotel, Hot Springs, Arkansas. Mrs. Curry Bradburn, Jr., of Little Rock, is Convention Chairman.

Following is a summary of planned convention activities:

Registration — North Parlor — Arlington Hotel

Monday, April 26

8:30 A.M.	Pre-Convention Breakfast, Presidential Suite
9:30 A.M.	Opening General Session, Venus Room

12:30 P.M. Hospitality Hour, Fountain Room, Arlington Hotel

1:00 P.M. Luncheon, Fountain Room
Guest speaker: Mrs. Amos Johnson, Garland, North Carolina, Southern Regional Vice President, Woman's Auxiliary to the American Medical Association

AMA-ERF Pageant
Mrs. Richard Martin, Paragould, State Chairman
Mrs. Hal Dildy, Little Rock, Pulaski County's AMA-ERF Chairman

4:00 P.M. Reception honoring 1970-71 and 1971-72 State Board members
Mrs. Lynn Harris and Mrs. Harold Langston, hostesses.
Auxiliary President's Suite.
All Auxiliary members are invited

Tuesday, April 27

8:00 A.M. Past President's Breakfast, Montagu Room, Arlington Hotel

8:30 A.M. Coffee and doughnuts will be served in the Venus Room

9:30 A.M. Second General Session, Venus Room

11:30 A.M. Joint Memorial Service with the Arkansas Medical Society, Ballroom of the Arlington Hotel

12:15 P.M. Cocktails, Terrace of the Downtowner

12:45 P.M. Luncheon, Crown Room, Downtowner
Arrangements: Woman's Auxiliary to the Pulaski County Medical Society, Mrs. W. Myers Smith, president
Guest speaker: Mrs. Ramsay H. Moore, Dallas, Texas, President, Woman's Auxiliary to the Southern Medical Association
A Board meeting will follow the luncheon

The following slate of officers will be voted on at the Convention:

President:	Mrs. Harold Langston, Little Rock
President-elect:	Mrs. W. Myers Smith, Little Rock
Northeast Vice-President:	Mrs. Asa Crow, Paragould
Southeast Vice-President:	Mrs. Charles McCarty, Helena
Southwest Vice-President:	Mrs. Robert Nunnally, Gurdon
Northwest Vice-President:	Mrs. D. J. McMinimy, Fort Smith
Recording Secretary:	Mrs. James Bethel, Benton
Treasurer:	Mrs. Harlan Hill, Little Rock

Candidates for "Arkansas Doctor's Wife of the Year" will be guests of honor at the convention. The candidates are:

Mrs. Art Martin, Fort Smith
Mrs. Curtis Jones, Sr., Benton
Mrs. James H. Abraham, Little Rock
Mrs. H. V. Kirby, Harrison
Mrs. Asa Crow, Paragould
Mrs. Don Vollman, Jonesboro

The candidates names were submitted by their respective county Auxiliaries and were voted on at the January Board Meeting. The winner will be announced at the convention by Mrs. Lynn Harris.

Scientific Exhibits

The scientific exhibits will be located in the mezzanine lobby area and the area of the Conference Center adjacent to the technical exhibits. All members are encouraged to visit the exhibits as they are an integral part of the scientific program.

The following exhibits will be on display:

G. Doyne Williams, M. D., Little Rock
Gilbert Campbell, M.D., Little Rock
"Cardiovascular Surgery at the University of Arkansas Medical Center"

Dowling B. Stough, III, M.D., Hot Springs
"Skin Allotransplantation and Selected Surgical Office Procedures"

William B. Stanton, M.D., Fort Smith
"Cleft Palate and/or Orthodontia"
"The Crippled Children's Division Program"

James J. Pappas, M.D., Little Rock
M. E. Winston, M.A., Little Rock
"Auditory Aids for the Hearing Handicapped"

Dale Alford, M.D., Little Rock
"Subnormal Vision in Children"

Arkansas Department of Health
John T. Herron, M.D., Little Rock, State Health Officer
Reginald C. Ramsey, M.D., Little Rock
"Division of Maternal and Child Health (Family Planning)"
Mr. Frank Wilson, Little Rock
"Division of Radiological Health"
Bryant Swindoll, M.D., Little Rock
"Division of Chronic Diseases (Physical Therapy)"

Jack W. Kennedy, M.D., Little Rock
"Tuberculosis in the General Hospital"

Ellery C. Gay, Jr., M.D., Little Rock
"Sinus Disease"

John E. Allen, M.D., Little Rock
John D. McCracken, M.D., Little Rock
"Cardiac Surgery at Baptist Medical Center"

Arkansas Rehabilitation Service
Mr. L. D. Kerr, Little Rock, Information Director
"They — Medical Science and Rehabilitation — Go Together"

Francis H. Stern, M.D., Philadelphia, Pennsylvania
"Management of Leg Cramps of Peripheral Vascular Disorders"

R. Wayne Neal, M.D., Tulsa, Oklahoma
Albert Shirkey, M.D., Tulsa, Oklahoma
Norman L. Bartlett, M.D., Tulsa, Oklahoma
"Cardiovascular Diseases"

R. Barry Sorrells, M.D., Little Rock
(Title To Be Announced)

Mrs. Neil Barnhard, Reference Librarian
University of Arkansas Medical Center
"Services of the University of Arkansas Medical Center Library"

Fifty Year Club of Arkansas
G. Allen Robinson, M.D., Harrison, President
"A History of Medicine in Pictures"

Woman's Auxiliary to the Arkansas Medical Society
Mrs. Richard Martin, Paragould, Chairman, AMA-ERF Committee
"AMA-ERF"

ARK-PAC
William S. Orr, M.D., Little Rock, Chairman
Hospitality Booth

Technical Exhibits

The business firms who purchase exhibit space at our Annual Session contribute a great deal to the financing, as well as to the educational aspects, of the meeting. The number of visits to the technical exhibits is the only criterion by which these companies can judge the value they receive from the investment in booth rental, displays, and employee's time. You will be rewarded for the time you spend visiting the exhibits. Following are descriptions of displays to be featured.

ORTHO PHARMACEUTICAL CORPORATION

ORTHO is proud to present the most complete line of medically accepted products for control of conception and the treatment of vaginitis.

A. H. ROBINS COMPANY

The A. H. Robins Company will present the Dalkon Shield, the new, modern, superior, intrauterine device at this meeting. You are cordially invited to visit our display and discuss the Dalkon Shield with our representatives.

RATHER, BEYER AND HARPER

Representatives of Rather, Beyer and Harper will have brochures and all information on the Arkansas Medical Society group plans of insurance — specifically the Income Protection Plan which is now issued on a guaranteed renewal basis, the Office Overhead Expense Plan and the new Million Dollar Professional Liability Policy. Records will be available so that each doctor may review the in-

surance coverages which he has under the group plans of the Arkansas Medical Society.

PARKE, DAVIS AND COMPANY

Our representatives will be pleased to discuss selected pharmaceutical products at the Parke-Davis booth.

NORTHWESTERN NATIONAL LIFE INSURANCE COMPANY

The Arkansas Medical Society Life Insurance Plan will be displayed in booth space number five. The plan is available to all members of the society. The plan is underwritten by Northwestern National Life Insurance Company, administered by Meyer F. Marks, Inc. and serviced by V. Waner Marks, CLU. Brochures will be available on the plan.

Brochures will also be available on a Pro-Group life insurance plan for physicians and their employees. This plan is available for Sole-proprietors, Partnerships and Professional Corporations.

Professional Corporations fringe benefit brochures are also available.

AYERST LABORATORIES

Our representatives look forward to a visit with you, and for the opportunity to discuss the Ayerst products and services of interest to you.

ELI LILLY COMPANY

You are cordially invited to visit the Lilly exhibit. Our sales representatives in attendance welcome your questions about Lilly pharmaceuticals. You may be particularly interested in discussing the growing family of cephalosporins.

G. D. SEARLE AND COMPANY

You are cordially invited to visit the SEARLE booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be information on DEMULEN(R), ENOVID(R), ALDACTAZIDE(R), FLAGYL(R), LOMOTIL(R), PRO-BANTHINE(R) and other drugs of interest.

BRISTOL LABORATORIES

A cordial invitation is issued to all members of the Society to visit the Bristol booth and discuss products of Bristol research with representatives in attendance.

ARKANSAS BLUE CROSS-BLUE SHIELD

Our booth is for your convenience and we welcome your visit. Blue Cross-Blue Shield's representatives are always ready to help solve any case problem or answer your questions. The medical profession has been largely responsible for our growth in membership which now totals over 400,000 — an achievement of which we should all be proud.

SANDOZ PHARMACEUTICALS

Sandoz Pharmaceuticals invites you to visit our display at booth No. 11, where our representatives will be happy to provide you with complete information on our new product, SERENTIL!

HOECHST PHARMACEUTICAL COMPANY

The representatives at booth No. 12 will be happy to discuss Hoechst products with particular application to the physician's individual practice. Featured is Lasix(R) (furosemide), Surfak, Doxidan, Festal and Festalan.

MOUNTAIN VALLEY MINERAL WATER COMPANY

Mountain Valley Water is celebrating its 100th year. As part of the company's anniversary celebration, Mountain Valley is sponsoring the appearance of Hildegarde at the inaugural banquet on Tuesday, April 27th.

Mountain Valley Water will be available in space 13 in the exhibit hall. Stop by for a drink of pleasant tasting, low sodium (2.8 p.p.m.), mildly alkaline (pH. 7.6), hard water, the only natural water distributed nationally.

WM. T. STOVER COMPANY, INC.

The William T. Stover Company, Inc., of Little Rock, will have a booth staffed with informed and qualified representatives — eager to welcome you and assist in any manner possible — as well as to show you the up-to-date developments in the medical and surgical industry.

DABBS SULLIVAN, TRULOCK AND COMPANY, INC.

Dabbs Sullivan, Trulock and Comany, Inc., will be represented by Melvin Spear who will be happy to answer your questions on securities and assist you in establishing a sound investment program. Brochures will be available.

PRO SERVICES, INCORPORATED

PRO Services, Inc., is the administrator of the Arkansas Medical Society's Program for Keogh and Professional Corporations.

PRO Services, without fee, will:

Advise you on whether to incorporate your practice or use Keogh.

Assist in getting you incorporated.

Work with your attorney and accountant in establishing all of the tax-qualified benefit programs when you are a Professional Corporation.

Handle all of the investments and administration details for Pension, Profit Sharing and Fringe Benefit Plans.

KAY SURGICAL, INC.

Kay Surgical is now a subsidiary of General Medical Corporation and will feature the Medi-Pak line produced and distributed by General Medical.

There will also be on hand a representative from Hyland showing the Flint Prothrombin Timer.

WILLIAM H. RORER, INC.

William H. Rorer, Inc., takes pride in exhibiting its fine pharmaceutical products at this convention. Our representatives will gladly discuss Maalox, Camalox, Ascriptin, Quaalude and our other products with you.

AMERICAN MEDICAL FACILITIES CORPORATION

The AMERICAN MEDICAL FACILITIES CORPORATION display at the Arkansas Medical Society annual meeting will contain architectural renderings showing various types of medical building projects which this company designs, builds and equips on a turn-key development program designed to produce a high quality product at realistic, substantial savings to our clients. The display is an early American living room motif.

ASTRA PHARMACEUTICAL PRODUCTS, INC.

Information and descriptive literature pertaining to Xylocaine (R) (lidocaine) and Citanest (prilocaine) local and topical anesthetics, and the intravenous use of Xylocaine in the treatment of life-threatening cardiac arrhythmias will be available at the Astra booth.

E. R. SQUIBB AND SONS, INC.

Members of the medical profession who search for better agents to prevent and treat disease are eager to learn of new products and improvements in products. Since therapeutic advances are constantly being introduced to the professional market, much valuable product information is available. Your inquiries about the latest results of our research will be welcomed.

CUMMINGS X-RAY COMPANY

We plan to show our new MUSTANG. This is the newest automatic processor for X-Ray film, capacity 45 per minute, 90 second cycle, simplicity of installation, 110 volt operation, supplied with 2½ gallon smartway developer replenisher system that drastically reduces developer oxidation, all for under $4,000.00.

The MINXRAY portable X-Ray, extremely versatile, uses standard size X-Ray film, with generator, weight 16 lbs. 7 oz. Collumator carrying case, aluminum tripod stand, all complete, for under $1,000.00.

The Birtcher representatives will be in our booth to demonstrate the latest in Medical instrumentation for Cardiac Monitoring and therapy, Blood Pressure Monitoring, Electrosurgery and Physical Medicine, and the new solid state electrocardiograph.

MR. JAMES A. ALLEN, C.L.U.

Visit exhibit number 30 for a discussion with James M. Allen, C.L.U., on the Professional Corporation and life insurance. Literature will be available.

ABBOTT LABORATORIES

Abbott will feature Ogen (R) (Piperazine Estrone Sulfate) in the new 21-Pak and Placidyl (R) (Ethchorvynol) 750 mg., a recently announced mid-range dosage form.

STUART PHARMACEUTICALS

A cordial invitation is extended to all members and guests attending this meeting to visit the Stuart Pharmaceuticals booth. Trained representatives will be in attendance to answer your questions on our products: DIALOSE(R), DIALOSE(R) PLUS, MYLANTA(R), MYLICON(R), STUART PRENATAL(R), STUART PRENATAL(R) w/FOLIC ACID, SORBITRATE(R), and our new products, PROBEC-T(R), KINESED(R), and STUARTNATAL (TM) 1+1.

LAKESIDE LABORATORIES

Lakeside Laboratories, Inc., exhibit will include Cantils, Imferon, Mercuhydrin, Metahydrin, Metatensin, Norpramin, and the MedCom Learning System on Depression.

MANHATTAN LEASING COMPANY

MANHATTAN LEASING COMPANY, Suite 320, 300 Spring Building, Little Rock, Arkansas 72203, (501) 375-9118. Booth No. 35. Our booth display will have photographs of different types of our presently leased equipment, both medical and non-medical. Manhattan has been especially active in the medical field and currently lists many doctors, hospitals, nursing homes, etc., with lease dollar volume in a very substantial amount. Lease terms are usually for two to five years, but special plans can be arranged for large transactions. Ideas may be given to help with expansion plans. Brochures will be available pointing out some of the advantages of leasing.

AUTOMATED MANAGEMENT SYSTEMS

Automated Management Systems is different from other computerized receivables and billing companies. The AMS system was designed specifically for doctors. AMS caters exclusively to doctors. AMS is a nationwide company now servicing over 4,000 doctors, providing in-depth accounts receivable management information weekly and monthly along with a proven method of accounts receivable control, billing to patient accounts and collection procedures on delinquent accounts. Automated Management Systems can help you organize your practice to give you greater efficiency in your office and a greater return on your accounts receivable. Visit us at booth number 38 for further details.

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The Arkansas Medical Society gratefully acknowledges a convention contribution from the Upjohn Company. Upjohn was unable to participate in the technical exhibits but wished to contribute to the educational program. The Society appreciates Upjohn's support.

House of Delegates Business Affairs

Reports printed below are brought to the attention of individual members and the county medical societies. The items reported here represent those received in time for publication in advance of the meeting. All reports will be referred to reference committees. Members are urged to attend the open hearings of the reference committees to express their views. Reference Committee hearings are scheduled for 3:30 P.M. on Sunday, April 25.

ANNUAL COMMITTEE REPORTS

Committee on Public Health (Rural Health)

Ben N. Saltzman, M.D., Chairman

The chairman of the committee presided and moderated a panel for the National Rural Health Conference held in Milwaukee, Wisconsin this spring.

The committee cooperated in presenting the second Emergency Health Services Conference to the State of Arkansas.

The chairman was awarded an Outstanding Achievement plaque by the Arkansas Public Health Association.

The committee has continued to cooperate with the State Health Department in all of its programs.

It has functioned in cooperation with the Council on Rural Health of the American Medical Association.

The chairman was Arkansas' representative at a meeting of the American Medical Association Council on Environmental and Public Health on January 22nd in San Antonio, Texas. The purpose of the meeting was to encourage and assist Medical Societies in the development of their programs for Environmental and Public Health affairs. This was a regional meeting covering the Department of Health Education and Welfare Region No. 6 (Arkansas, Louisiana, New Mexico, Oklahoma and Texas). The statement regarding the activities of our committee on Public Health was forwarded to the American Medical Association.

The members of the committee are: Dr. John P. Bethel, Dr. Wayne Lazenby, Dr. C .A. Archer, Jr., Dr. Vestal B. Smith, Dr. Omer E. Bradsher, and Dr. Bryant Swindoll.

Sub-Sommittee on Liaison with the State Board of Health

Karlton H. Kemp, M.D., Chairman

This committee met with a very poor attendance at the winter meeting.

It is apparent that this committee should be dissolved for we have built-in liaison with the Board of Health in that it is made up of seven members of the Arkansas Medical Society plus a nurse, a pharmacist, an engineer and a dentist.

After reviewing the minutes of the past year and one-half of the Board of Health, I am again aware of the excellent job that these men are doing to protect the public. I am again thankful for the leadership of Dr. Herron.

I recommend that this committee be dissolved.

Please note that there is also a standing committee on Public Health.

Sub-Committee on Maternal and Child Welfare

John W. Trieschmann, M.D., Chairman

The Maternal and Child Health Sub-Committee met on November 21 in connection with the winter meeting of the Society. The following were present: Dr. John Trieschmann, chairman; Dr. Dale Briggs, secretary; and Dr. J. W. Burnett. Consultants to the Committee were: Dr. Rex Ramsey (Head of Maternal and Child Health of the State Health Department) and Dr. Loyd Young (Department of Psychiatry of University of Arkansas Medical Center).

Considerable discussion was lent to the following topics:

TOPIC NO. 1

Act 434 of 1969 entitled An act to define child day care facilities and to provide for their licensing by the State Department of Public Welfare and such rules and regulations to be laid down by that department.

Our committee has made extensive inquiries into the Day Care situation in Arkansas. We can assure you there is a great need in having a State Department that will make fair and reasonable rules and regulations so that the children of working mothers can have the best care.

We have studied the existing act and the new regulations that have been fathered by the Wel-

fare Department. We have discussed this with groups of Day Care managers, legislators, and the Welfare Department.

As you may have read, there has been considerable opposition to the proposed regulations and the legislative council has tabled enforcement of these rules until such differences can be straightened out. We feel our committee can play a large role in making recommendations to the Legislative Council and the Legislature.

Below we have enumerated some of the weaknesses and faults as we have found them.

I. We think the responsibility for licensing Day Care Centers would be better handled in the State Health Department.

a. State and county health authorities are already working in areas of inspection (fire, housing, sanitation, and health).

b. Allow physician consultation (State Department Maternal and Child Health).

II. Licensing—Local Grievance and Control Committee.

a. One central state committee cannot know all the problems relevant to a local situation.

b. Already regional inspections have antagonized local operators who are doing a good job. Any rebuttal on their part takes months to be heard, forcing large unnecessary expenditures or else closing.

III. Appointment of Physician or Pediatrician as Consultant.

a. No physician was consulted in setting up regulations. Only samples from other states were used as a guide line.

b. The proposed regulations are far too difficult for many regions in our state to obtain.

In short, regulations as now written consider only the welfare and poverty child without considering the terrific burden placed on the private enterprise of Day Care work and the increase in expense that will occur to and be borne by our working mothers.

We feel with certain changes we can have a workable program for all children.

A more detailed explanation of our recommendations can be provided if so desired.

Our committee is prepared to offer our recommendations to the Legislative Council and desires the approval of the Council to carry this further.

TOPIC NO. 2

Child abuse has become an increasing problem. Its total scope in Arkansas is unknown. We know on a local level it has been a nightmare. The problem as we see it is:

1. Apathy in law enforcement agencies.
2. Lack of reporting.
3. Improper handling of the situation once it has occurred.

Dr. Young and others at the University Medical Center have for the last several years used a team approach and this has been rewarding. Dr. Young in conjunction with our committee, the Welfare Department, and Senator Alagood are working on a new law which will govern and clarify responsibilities in such cases. We feel regional operations of teams controlled through the public welfare — especially the Department of Child Health — can best initiate cooperation from law enforcement agencies and physicians.

A team consisting of (a) a psychiatrist or physician, (b) prosecuting attorney or representative, (c) visiting nurse, (d) welfare — child care department could be mobilized in each case referred. This would allow the best opportunity to the child and a chance for rehabilitation of the family.

We hope by the spring meeting to have the new law either enacted or well on its way.

There were no other topics of discussion and the meeting was adjournd.

Sub-Committee on Tuberculosis

Robert M. Franklin, M.D., Chairman

The Sub-Committee on Tuberculosis met on November 22, 1970, at the Coachman's Inn during the fall meeting of the Arkansas Medical Society. Present at the meeting were Dr. Harley Darnall of Ft. Smith and Dr. Kenneth Siler of Harrison. Others in attendance included Dr. Duane Jones, Director of the Tuberculosis Sanatorium, Dr. Robert Abernathy, Professor and Head of Medicine at the University of Arkansas Medical Center, and Dr. Joe Bates.

The committee discussed the management of tuberculosis patients in the State of Arkansas outside the sanatorium area, the Pine Bluff program, what could possibly be done with the san-

atorium if part of the Tuberculosis Program was phased out over a period of years, and the feasibility of a chronic lung center. There were no definite conclusions at this time. There were no recommendations. Following the discussion, the committee adjourned.

Sub-Committee on Physical Fitness and School Health

Robert H. Langston, M.D., Chairman

During 1970 the Sub-Committee on Physical Fitness and School Health was enlarged to six members and sub-divided as to areas of responsibility with a section concerning physical fitness and the other for school health.

The committee sponsored the Second Annual Red and White Symposium on athletic injuries at the University of Arkansas Medical Center at the time of the University of Arkansas spring football game.

The committee also continued with its efforts in obtaining team physicians for all athletic teams in the state with emphasis on the preseason physical examination.

The committee was also responsible in cooperation with other committees in the drug education field.

At the winter meeting of the Arkansas Medical Society, the committee decided to sponsor a state symposium in 1971 on school health in association with the State Board of Education and the education department of the various colleges in the state.

Committee on Mental Health

William O. Young, M.D., Chairman

The Committee on Mental Health met at the Coachman's Inn on November 22, 1970, at the meeting of the fall clinical session of the Arkansas Medical Society. Members attending were: Dr. William G. Reese, Dr. Richard C. Petty, Dr. Payton Kolb, Dr. W. C. Whaley, and Dr. W. O. Young. Additional guests were Mr. Charles Acuff, Superintendent of the Arkansas Children's Colony and Commissioner of the Department of Retardation, Mr. Walter B. Clancy, Director of the Arkansas Health Planning Program, and Dr. Robert Matthews, Director of Postgraduate Education in Psychiatry at the University of Arkansas Medical Center.

Mr. Clancy reported on the planning in the State as far as mental health is concerned, Mr. Acuff on some of the problems and plans of the Department of Mental Retardation, and Dr. Matthews reported on the progress of the Postgraduate Education Program.

The State planning at the present time is emphasizing the establishment of small mental health centers that are not necessarily comprehensive units in smaller communities, while they are encouraging the location of Comprehensive Mental Health Centers in the larger communities of the State. Members of the Committee, along with Mr. Acuff, urged the State Planning Program to include facilities for day care units for the retarded with the Mental Health Centers. Mr. Clancy and Dr. George Jackson are codifying the laws regarding the mentally ill in Arkansas so that a comprehensive law may be presented to the Legislature to replace the many different laws that now exist.

The need for psychiatric facilities at the Arkansas Children's Colony was discussed by the Committee. The last Legislature authorized the establishment of a psychiatric unit there but did not appropriate any funds for construction or for staff. The Committee feels that the funds should be appropriated to pay the expenses of such a unit or that some other method should be worked out to supply adequate psychiatric services to the three Children's Colonies in Arkansas. It was suggested that such a unit might be located either at the University of Arkansas Medical Center or at the Colony at Alexander, Arkansas, which is very close to Little Rock.

Dr. Kolb presented the legislative goals of the Arkansas Association for Mental Health. The Committee agreed with these goals and felt that it was quite important that the Community Mental Health Division of the Arkansas State Hospital be adequately financed. We also felt that it was very important that the Child Study Unit at the University of Arkansas Medical Center receive adequate funds either through the budget of the University of Arkansas or from a separate appropriation. The Mental Health Association had urged that there be aid given to the program of training teachers for special education classes in the Public School System. Dr. Reese pointed out that there has been a pilot program in this area at the University of Arkan-

sas School of Medicine for several years. Here, again, the lack of funds has kept it from expanding to the point that they could train teachers for the public schools. The Committee agreed with Dr. Reese that this was an important area of the program of the Medical Center and urged the Society to support moves to get adequate funds for this program.

The Committee is quite concerned about the problem of getting adequate training in psychiatry for nurses and technicians. There is a marked shortage of psychiatric nurses in Arkansas, as well as technicians, and if more Mental Health Centers are established throughout the State it will be essential that we have trained people, nurses and technicians, to staff these units. We suggest that a center be established, possibly at the University of Arkansas Medical Center, to aid in giving this training.

The Committee feels that they should again commend the Department of Psychiatry at the University Medical School, the Veterans Administration Hospital, and the State Hospital for their improved programs for residency training in psychiatry. These programs have now been completely combined and offer a much better range of training and experience for doctors who are taking this training.

The Committee was quite happy about the success of the Postgraduate Education in Psychiatry Program at the Medical Center. Dr. Matthews was congratulated on the recognition that this program has received. The seminars for physicians who want additional training in psychiatry was established, at the suggestion of the Arkansas Medical Society, in the Department of Psychiatry about five years ago and Dr. Matthews has been the director since that time. This program is now considered a model program and is one of the best five or six such programs in the United States. Psychiatrists involved in medical education from other states frequently visit Arkansas to study this program and Dr. Matthews has been named a Consultant to the Regional Committee on Postgraduate Education.

The Committee feels that the Arkansas Medical Society is continuing to take more and more interest in the problems of Mental Health in Arkansas and we feel that the actions of the Medical Society in the past years has been very helpful in establishing programs.

Immunization Sub-Committee

Wilbur G. Lawson, M.D., Chairman

The bulk of this Sub-Committee's time was expended this year in monitoring and following the progress and maturing of the Rubella vaccine program. As you remember, this Sub-Committee reported in the 1969 report that there were too many authoritative questions to allow an unequivocal endorsement of uncontrolled mass public clinics. We projected that the vaccine was very promising and endorsed its use in private and public health clinics and those community clinics sponsored by a county medical society. Later at the April 1970 State Meeting in Hot Springs, Reference Committee No. 1 of the House of Delegates recommended that the report not be accepted and referred the report back to committee. A resolution was approved from the Pope-Yell County Medical Society endorsing a state wide mass immunization of the appropriate age group children in the spring of 1970. This resolution in itself was premature in that there was not sufficient Rubella virus vaccine available for such an ambitious program.

At a subsequent meeting November 22 in Little Rock at the winter work session of the Society, the Sub-Committee again met in a planning session. Tape recordings, public literature, and personal experiences were reviewed in detail by the committee members present, and it appeared that our program of action had been quite reasonable and rational in retrospect after viewing the work of many others. However, at this point, with some of the worst fears unrealized and some of the lesser fears still not completely answered, it appeared that the year of additional experience would allow us to, at this time, endorse the use of Rubella virus vaccine on a mass clinic basis; but still given under controlled circumstances with accurate records kept on the patient's name, address, source of vaccine, and review of any subsequent reaction syndromes.

Concerning the new combination vaccines, using mumps and Rubella together, it was felt that we should apply the same basic philosophy to this material as we proposed one year before on the Rubella vaccine, in that as individuals, and as a group, we are again with insufficient experience status to make a rational judgment on this vaccine.

At this meeting the committee completely revised and prepared for publication the immunization schedule as previously prepared in 1966 for distribution to all institutions, offices, and practitioners of medicine in the state of Arkansas. This will be printed early in 1971. I wish to thank the president for his indulgence and support during some rather trying times during the year. My committee has been a most diligent, thoughtful, and concerned group. We still hold the aforestated philosophy that our hope is that in our haste to do good that we do no harm.

Sub-Committee on Traffic Safety
Carl L. Williams, M.D., Chairman

The Traffic Safety Committee has continued to be concerned over the quality of emergency health care; particularly regarding the quality of ambulance attendant care and physical capabilities of care while in transit to the hospital.

The Committee represented the Arkansas Medical Society in sponsoring an Emergency Health Care Seminar on September 4, 1970, at the University of Arkansas Medical School in Little Rock in co-sponsorship with several other organizations.

The Committee, in conjunction with the Committee on Aging, made recommendations to the House of Delegates concerning the creation of a Medical Advisory Board, available to the Driver's License Division of the Arkansas Revenue Department, to advise the Board on physical limitations that might hamper one's driving ability. Medical recommendations were also itemized and submitted with this report. These recommendations were passed by the House of Delegates in the November 1970 meeting and forwarded on to the Legislative Council.

The Committee has asked further clarification of our legal counsel regarding the possible medical liability for assault when drawing blood samples for the study of alcohol content. Several members have voiced concern regarding possible liability for assault despite the informed consent law. Also the Committee desires to have the Implied Consent Law enlarged to include examination for drugs such as barbiturates and hallucinatory type drugs.

The Committee would also suggest to the Arkansas Medical Society that tetanus be included among the reportable diseases to the State Health Department so that a more accurate study can be made regarding the need of a statewide tetanus immunization program. It is hoped this might be effected in the coming year.

The Committee, in its concern over emergency health care, feels that the most practical solution to this problem would be in the creation of a paramedical person to be designated an Emergency Health Technician and that this person be subjected to a curriculum of not less than one year of didactic and on-the-job training. It is hoped that this person would qualify to fill the need for ambulance attendants, emergency room personnel and employees in the health field for industrial concerns.

The committee submits the following resolution for consideration by the House of Delegates:

EMERGENCY HEALTH TECHNICIAN
TRAFFIC SAFETY COMMITTEE
ARKANSAS MEDICAL SOCIETY

WHEREAS, health care to the emergency patient is usually first administered by ambulance attendants, emergency room personnel or perhaps those of lesser training, and

WHEREAS, the ultimate recovery and the possible permanent disability are perhaps related to the quality of this initial medical care, and

WHEREAS, care to the emergency patient and the injured is acknowledged to be the area most in need of improvement, and

WHEREAS, there is no uniform standard of training or performance required of those persons involved in the initial evaluation and transportation of the injured, and

WHEREAS, it is the responsibility of the Medical Profession to require high quality care to all needing medical care, including the acutely injured,

THEREFORE, the Traffic Safety Committee of the Arkansas Medical Society and the Trauma Committee of the Arkansas College of Surgeons requests the Arkansas Medical Society to consider and act on the following resolution at the April 1971 House of Delegates meeting to present a tangible and worthwhile solution to this dilemma to the State Administration and General Assembly.

RESOLVED that a new health care designation, Emergency Health Technician, be discussed and developed in Arkansas under the guidance and responsibility of the Arkansas Medical Society, and

RESOLVED that a curriculum be established for training Emergency Health Technicians as ambulance attendants, emergency room attendants, and for industrial emergency care, and

RESOLVED that the Arkansas Medical Society formulate standards of achievement to qualify persons for the above designation of Emergency Health Technician, and

RESOLVED that once certified the Arkansas Medical Society will promote these persons to serve the public in the above emergency health situations, and

RESOLVED that the Arkansas Medical Society be active in developing and promoting these training programs in various regions of the State of Arkansas.

Sub-Committee on Liaison with Vocational Rehabilitation
Paul G. Henley, M.D., Chairman

The Sub-Committee on Liaison with Vocational Rehabilitation met November 22, 1970, during the annual winter meeting of the Arkansas Medical Society with the following members present: Dr. Paul G. Henley, chairman, Dr. James D. Mashburn, Dr. Major Smith, Dr. H. King Wade and Dr. Rhys A. Williams. Also present was Mr. Russell Baxter, Director of the Arkansas Rehabilitation Service.

There was again noted a most cordial and satisfactory relationship between the Rehabilitation Service and the Medical Society. Most noticeable was the total absence of fee controversy. Mr. Baxter stated that when funds were available assistant fees would be paid.

It is hoped that at our next meeting representatives of Title XVIII, Title XIX and Social Security can meet with the committee.

Topics covered were:

1. Relationship of Vocational Rehabilitation to Medicare – Title XVIII.
2. Relationship of Vocational Rehabilitation to Medicaid – Title XIX.
3. Relationship of Vocational Rehabilitation to Social Security.
4. Relationship of Vocational Rehabilitation and the Arkansas Medical Society.

According to Mr. Baxter there is no relationship between Title XVIII recipients and the Vocational Rehabilitation Service except on occasion. The Rehabilitation Service may absorb some services that are not covered by Title XVIII.

It is anticipated that as Title XIX is expanded certain presently covered services by Rehabilitation will be absorbed, such as physical restoration.

All clients referred for Social Security disability are automatically referred to the Rehabilitation Service. Those clients that are rehabilitable and refuse service are denied disability.

The consensus was that continued effort should be made to assure the primary attention of the Rehabilitation Service be directed to those conditions that have the highest rate of salvage or return to service. The committee was completely cognizant of the fact that many conditions have a large emotional appeal but often times do not result in the greatest value received from the standpoint of the rehabilitation and taxpayer dollar. The committee was unanimous in recommending that funds available to the Rehabilitation Service not be diluted to the detriment of the existing program.

Committee on Medical Education
Lee B. Parker, Jr., M.D., Chairman

The committee has been relatively inactive but would like to present one important development to the Society. Last year it was reported that a project related to postgraduate education for physicians funded through the Regional Medical Program had been approved and was awaiting appropriation of funds.

It was proposed and approved by our committee and the Society that this project be started in councilor district four as a pilot program and expanded into district three if the results proved worthwhile and as money was available.

In the late summer, money for initiation of the project was made available to the State Regional Medical Program and from them to the University Medical Center. The Arkansas Medical Society is to be considered a co-sponsor of this project. The chairman of the Medical Edu-

cation Committee (Lee Parker) is presently serving to direct this project.

Briefly, the program offers three basic means of educational activities:

1. Audiovisual aids — to be used in the local hospitals
   A. Didactor unit — a small, self-contained teaching machine type unit
   B. Audiscan unit — a small, self-contained unit which combines the features of a tape recorder and film editor for presentation of pictures and sound.
2. Speakers — for various local, area, and district meetings
3. Consultants — Consultants in the various specialties will be made available to the staff physicians of the local hospitals in the district, both on a regular scheduled basis and an unscheduled basis if need or interest dictates.

Basically, this is the heart of the proposed program submitted to the Regional Medical Program by the Arkansas Medical Society and the director is willing to admit its appropriation for his use.

One other educational activity will be at least financially assisted through this program, the so-called "Dial Access" telephone system. Hopefully, this program will have been activated and appropriate information regarding its use and availability will have been mailed out to every physician in this State before this report appears in print. Therefore, I will make no attempt to describe it here.

This report is being submitted in early January and at this time consultants have visited four of the seven hospitals in district four. It is too early to tell anything at this time; however, I am encouraged on the basis of verbal reports and personal observations.

Committee on Continuing Education

George F. Wynne, M.D., Chairman

The Committee has been working in cooperation with the Dean and the faculty of the Medical School in planning and promoting the new program for the continuing education of the Physicians of Arkansas that has been funded by the Arkansas Regional Medical Program.

This report is merely one of information for the Council and for the State Medical Society.

You will recall that the original program of the Arkansas Regional Education program requested a grant of $500,000. This request was made in 1969. When the program was approved by the Federal Government, Arkansas received $100,000 instead of $500,000. This money became available in July 1970. With the availability of the money, the Committee began to search for a Director for the program. When we were unable to find a full time director, we were able to obtain the services of Dr. Lee Parker of Fayetteville as a part time director.

Due to the reduction of funds, it was decided by the joint Committees of the Medical School, the Medical Society, and Regional Medical Program to use the funds to begin a pilot program for the continuing education of the practicing physicians in one district of the State only. It was decided that the Fourth District would be our first project. This pilot program will bring various consultant physicians, specialists and technicians to the community hospitals and aid the practicing physician with his problem in his own home area and his own community hospital.

The first team of physicians moved into the various communities of the Fourth District in December and a schedule of the visits are available to the physicians in this district.

Plans have already been made to move into the Third Medical District.

At this time, your Committee wishes to propose for the approval of the Council that the Ninth Medical District be the next district to benefit from this program.

Eventually, as funds and personnel are available, the Regional Education Program for the continuing education of the practicing physician will be available for the entire State.

Your Medical Society Committee of Continuing Medical Education will certainly be more active in the coming year. We propose to meet each quarter with the Medical School Committee and work closely with them in promoting this new program.

Committee on Public Relations

A. C. Bradford, M.D., Chairman

The Committee on Public Relations works closely with our Executive Vice President, Mr. Paul Schaefer, and our Assistant to the Executive Vice President, Mr. Paul C. Berry. They are

doing fine work and are active in all areas of Public Relations for the Arkansas Medical Society. Mr. Berry works closely with the committee and is in contact with the chairman at frequent intervals.

The committee met during the annual meeting of the Medical Society held in Little Rock in December and reviewed the work of Mr. Paul Berry and the committee in all areas of Public Relations.

Also the Drug Abuse Program of the State Society has gone well and has added real value to the Drug Abuse Education Program that is now going on within the State. We will continue to promote and support Drug Abuse Education.

It is the feeling of the Public Relations Committee that we need to begin planning and organizing a more active program of Public Relations aimed at the press and selected non society persons. Our State Meetings are probably the greatest Public Relations potential of any activities that we have in the State Society. It is the hope of the Committee on Public Relations that we can improve our Public Relations activities during the annual meetings. We should be able to look toward more generally positive results in our contact with the press and this approach should be physician instigated and organized and we should make a concerted effort to give information and whatever educational assistance to the press that is required.

Mr. Berry and Mr. Schaefer and the Public Relations Committee will make a special effort to organize a more active and effective Public Relations Program for our Society.

Sub-Committee on State Health and Medical Resources for Civil Defense

Edgar J. Easley, M.D., Chairman

The Sub-Committee as a whole did not hold a regular or called meeting during this reporting period, April 1970 through January 1971. However, numerous telephone conference and visits were made by members of the Committee to physicians in several counties expressing interest in the Emergency Health Services Plan.

The State Health Department is coordinating its efforts with State Civil Defense and the Civil Defense University Extension program in preselected counties to develop the Health annex to the local Emergency Operational Plan. The Emergency Health Services Plan in these selected areas cannot be adequately developed without the coordination and cooperation of the local Medical Society. It is imperative that the leadership for the "Emergency Health Services Council" be provided by a local physician. The council should be an active and progressive body to meet at least once each quarter. With the demand and apparent need for more adequate Emergency Medical Services, there should be ample projects and problems for the council's consideration. The counties in which development of emergency health services planning has been initiated since April 1970 are: Clark, Saline, Garland, St. Francis, Lee and Jefferson. Again, it must be emphasized that without adequate support, Emergency Medical Services will continue to be a neglected area of medicine at both the State and local level.

The following legislation is proposed for the 1971 meeting of the General Assembly:

A BILL

FOR AN ACT TO BE ENTITLED: "AN ACT TO AUTHORIZE THE STATE BOARD OF HEALTH TO INITIATE AND ADMINISTER EMERGENCY RELIEF, EVACUATION, MEDICAL AND OTHER EMERGENCY ACTIONS IN CASE OF A NUCLEAR DISASTER AND TO PROVIDE FUNDS FOR THOSE PURPOSES: AND FOR OTHER PURPOSES."

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF ARKANSAS FOR THE YEAR 1971:

SECTION 1. In the event of a nuclear accident, or any other incident involving uncontrolled emission of radioactive materials endangering the public health and welfare of this State, declared as such to be a "nuclear emergency" by the Governor of the State of Arkansas, the State Board of Health shall undertake, designate and initiate such emergency relief, evacuation, medical and other measures or actions necessary to combat the nuclear emergency, and protect the public health and welfare of this State, and to expend or authorize the expenditure of state funds on deposit in the State Budget Revolving Fund.

SECTION 2. *Severability*

If any provisions of this Act, or the application thereof to any person or circumstance, is held invalid, that invalidity shall not affect other provisions or applications, and to this end the provisions of this Act are declared to be severable.

SECTION 3. *Repeal*

All laws or parts of laws in conflict with this Act are hereby repealed.

The Status of the "Emergency Medical Stockpile," (now known as "Emergency Medical Supply Services") has remained the same for the last two years. Lack of funds have prohibited expansion of the program and curtailed significant updating.

There are thirty-five (35) Community Hospitals actively participating in the "Emergency Medical Supply Service Program." The majority of these hospitals have done an excellent job in rotating limited shelf-life items of the emergency medical supplies.

Advisory Committee to the Arkansas State Medical Assistants Society

A. C. Bradford, M.D., Chairman

The Medical Assistants Society is a most active society and conducts the affairs of their organization in an orderly and commendable manner. They have had regular House of Delegates meetings with good attendance and they continue to work toward increasing the membership and improving the role of Medical Assistants in the State of Arkansas. They continue to be one of the most important public relations assets that the doctor has in his office and in his relationship to the public in general.

Committee on Insurance

Harry Hayes, Jr., M.D., Chairman

The Insurance Committee met in April 1970 and laid plans for the coming year. During the summer months the Committee answered several pieces of correspondence. The Committee had a full meeting in Little Rock in November of 1970. A number of items were discussed, most of which were routine. Some of the premiums for certain group insurance coverages were raised. One inquiry was put out for a company to give us a quotation on one form of group insurance to see if the quotation would be appreciably lower than that given us by the Society-endorsed company. No reply has yet been received.

The Committee continues to receive inquiries from the membership regarding what they feel to be inequities in the payment of benefits to physicians for certain services. The Committee will continue to review this situation and make appropriate suggestions.

During the year, the Insurance Commissioner instigated a study setting up a Committee to explore an arbitration agreement between the Medical Society and the State Bar Association and work is continuing on this. There is a divergence of opinion among the Committee Members as to the value of such an arbitration board. It is felt that the membership of the Arkansas Medical Society should be advised of any developments in this field promptly.

All in all, this Committee had a quiet year.

The only recommendation would be that some set time be allowed during the Spring or Winter Meeting for questions and answers on the malpractice situation and we recommend that a knowledgeable speaker from either in or out of the State be obtained to conduct this session. This session should last for not less than one hour and not over two hours. This suggestion should be considered by the appropriate Reference Committee in light of rapid developments in the malpractice field.

Committee on Medicine and Religion

John H. Miller, M.D., Chairman

1970 was definitely a time of change in the area of medicine and religion in the resignation of Reverend Paul B. McCleave as Director of the American Medical Association department in this field. His duties were taken over by Mr. Arne E. Larson and in recent weeks Mr. Ralph Krueger has been added to the staff and Arkansas is one of the states in which he will especially be working.

These men are available to help us in our planning and execution of an effective program on the state and local level and interested physicians should contact them at the Chicago office of AMA.

After a number of years of most helpful work, Dr. Jerome S. Levy felt the need to resign as

chairman of our committee late in the year. Dr. Levy's concern has been contagious and we are appreciative of what he has done to help promote a better climate among ministers and physicians.

Several years back, our committee welcomed the help of Chaplain Don Corley of the Arkansas Baptist Medical Center as he has gone out over our State helping to set up physician-minister dialogues. Among the many places he has gone are the University Medical Center, Little Rock; Gravette Medical Center; Ouachita General Hospital, Hot Springs; Jefferson Hospital, Pine Bluff; Magnolia Hospital, Magnolia; Community Hospital, Paragould; Ouachita Hospital, Camden, and McGehee Hospital.

Our committee is most appreciative of Dr. Corley's effort and the fact that Arkansas Baptist Medical Center has been willing and able to let him leave his other duties and go at their expense. He is being asked to give a full report of his activities to the American Medical Association with the possibility that other states may want to pattern after what we are doing in Arkansas.

The committee met November 21st and 22nd for a dinner meeting on Saturday night and the next day as part of the one-day annual meeting with 100% attendance: Dr. John Miller, Camden (chairman); Dr. Fred Gordy, Conway; Dr. Kenneth Siler, Harrison; Dr. Randolph Ellis, Malvern; Dr. Alvin W. Strauss, Jr., Little Rock; Dr. Carl Wenger, Little Rock. Also in attendance were Dr. Don Corley of Little Rock and Mr. Arne Larson and Mr. Ralph Krueger of Chicago. Specific duties were assigned to each committee member. Mr. Paul Berry of the administrative staff of the Arkansas Medical Society was present and assured us of his desire to help us in our work.

Much of the discussions of these meetings were aimed toward a February 4 meeting which was held at the University of Arkansas Medical Center with representatives of our committee seeking further approval of a more progressive and extensive program of medicine and religion at the Medical Center. Our committee does not know what form this program may take but we do see the need and intend to make ourselves available to help every way we can to see that an effective program is established.

Also at the November 22 meeting, there was great concern that each local community or county medical society have an effective program of medicine and religion with appropriate dialogue between minister and physician taking place. Dr. Randolph Ellis, Malvern, a member of this committee, agreed to be liaison man between our committee and these groups.

Constitutional Revisions Committee
Lee B. Parker, Jr., M.D., Chairman

There are two items of old business to come before the 1971 Annual Session:

1. Amend Chapter VIII, Committees, Section 1(a), #3, to delete the words "Liaison with Public Health Department". This would serve to eliminate the Sub-Committee on Liaison with the State Board of Health as recommended in the 1969 Annual Session. First reading was in 1970 Annual Session. It is presented now for second reading.

2. Amend Chapter I, Membership, Section 7 (Military Members) to read as follows:

Section 7: (A) Regular members of the Arkansas Medical Society who are in the service of the armed forces of the United States, not as career officers, may be classified as military members, and carried on the rolls of their respective county societies as such. Military members shall have a waiver of dues during the time of service, providing that they are in good standing at the time they entered the armed forces. Military members shall enjoy full membership privileges and certificates of membership shall be issued to them each year.

(B) Young physicians going from internship or residency to military service shall be granted military membership with dues exemption, provided the request for such membership is transmitted through a component society. Such military membership shall be on an annual basis only. The requirement for active membership prior to the exemption shall be waived for such military members. Such members shall enjoy full membership privileges except that they may not vote or hold office, and certificates of membership shall be issued to them. This section shall not be construed to mean that military membership may be granted to those physicians who enter military service after a period of active

practice during which time they were not members of the Society.

Section 7(A) is unchanged.

Section 7(B) is the new addition being proposed in order that some ties may be maintained with the newly graduated physician serving in the armed forces.

There has been no new business to come before the committee although there have been informal contacts recommending a change in method of election of officers of the State Society. The committee has not considered any study of this proposal and probably will not unless so directed by the House of Delegates or the Council.

Senior Medical Day Committee
Ralph A. Downs, M.D., Chairman

The Senior Medical Day dinner was held at the Pleasant Valley Country Club in Little Rock on May 5, 1970. Dr. Jack W. Kennedy, president of the Society, presided over the dinner meeting honoring the senior medical students of the University of Arkansas Medical School. The class president, Jim Wellons, was recognized.

Speakers for the meeting were Dr. John Trieschmann, Hot Springs, whose topic was "Medical Ethics"; Dr. Stanley Applegate, Springdale, who spoke on "The Doctor as a Citizen", and Dr. Francis Henderson, Pine Bluff, who spoke on "Medical Organization".

Arkansas State Advisory Committee to the Selective Service System
Gerald H. Teasley, M.D., Chairman

The Medical Advisory Committee to Selective Service has had a very quiet year. There have been no calls for physicians to active duty other than those already scheduled to go. At the present time no future calls are anticipated.

It is a pleasure to give a reassuring report of this type.

Professional Services Review Organization
Charles F. Wilkins, Jr., M.D., Chairman

The Professional Services Review Organization was renamed by the Council of the Arkansas Medical Society on October 18, 1970 from its former name, Fee Committee or Twenty-One Man Committee. It was decided to do this to keep its designation in line with terminology now being used by Washington.

In keeping with the directive of the House of Delegates, the PSRO was reorganized and a limitation was placed on the term of service. The redesignated committee now consists of twenty physicians from general practice and the various specialties, the chairman, and the Executive Committee of the Arkansas Medical Society. The Council directed the committee to reorganize itself based on three year maximum term to allow for yearly new appointments. The PSRO members were polled and expressed the wish to do this by drawing lots. Reorganization was carried out in this manner and the members of the PSRO at present carry one, two, and three year terms with the exception of the chairman, who serves at the pleasure of the Council, and the Executive Committee of the Arkansas Medical Society.

On acceptance of the position as chairman of the Council of the Arkansas Medical Society, Dr. C. C. Long of Ozark resigned as chairman of the PSRO. Dr. Charles F. Wilkins, Jr., of Russellville, Arkansas was appointed chairman in his place.

To insure more adequate "peer" review, the Council of the Arkansas Medical Society appointed a Sub-Committee of Sub-Specialties wherein representatives of various sub-specialties with too few members to require regular attendance at meetings are on call to meet with the review organization as needed when claims in their specialty field are considered. At the present time, sub-specialty representatives have been appointed from Thoracic Surgery, Gastroenterology, Plastic Surgery, Pulmonary Diseases, and Pediatric Allergy.

The review organization holds a full committee meeting the fourth Wednesday of each month. This meeting takes place in the Blue Cross-Blue Shield Building in Little Rock. The PSRO serves as an advisory committee to the Medical Director of Blue Cross-Blue Shield for consideration of claims under Medicare, Champus, and Blue Cross-Blue Shield programs. Attendance and participation have been excellent, and it is felt that an excellent working relationship has been established with the Medical Director of Blue Cross-Blue Shield. The PSRO studies and gives opinion on items pre-

sented by the Medical Director. Its function is advisory and is not binding on the carrier, but its opinions are weighed heavily in considering specific carrier action.

Occasionally, a carrier action transmitted to the physician results in protest. If this cannot be settled satisfactorily, the physician may have the opportunity to appear before the PSRO. This has occurred in several instances during the past year.

There is currently widespread demand for review of medical care and charges. It is felt that this committee fulfills such review function and that the review of medical care remains in the hands of physicians. It is felt that this review organization will probably become increasingly active in the future.

Student AMA Liaison Committee
Alfred Kahn, Jr., M.D., Chairman

The Student Liaison Committee of the Arkansas Medical Society will plan to act primarily within the context outlined by the Council of the Arkansas Medical Society.

Namely, it was felt that the student representatives from the University of Arkansas School of Medicine should attend as non-voting members the House of Delegates Meeting of the Arkansas Medical Society. Furthermore, it was felt that it would be desirable for some of these representatives to attend the first Council meeting at the Annual Session, so that these young people can have some idea of how organized medicine works for the betterment of the public and the profession.

A further objective of this committee is to meet with the representatives from the University of Arkansas School of Medicine, when they have problems which they would like to discuss with a representative from the Arkansas Medical Society. Conversely, this committee will act as an intermediary or as an initiator to convey information of value from the Arkansas Medical Society to the representatives of the Student Medical Association.

No formalized program is planned.

Committee on Emergency Health Services
Robert M. Bransford, M.D., Chairman

The Committee on Emergency Health Services has had several meetings for planning and undertaking the annual Emergency Health Services Conference held at the University Medical Center in Little Rock on September 10, 1970. Again, we had an excellent program with good participation. The program was geared primarily to the officials in each community who had anything to do with emergency health care. This included funeral home directors, lawyers, police chiefs, fire chiefs, and hospital administrators and nurses. The comments following the program suggested smaller, local community programs which I would urge each delegate to undertake through his own county society. There are available emergency health training programs for ambulance drivers and emergency health care personnel. These are now being conducted throughout the State following request from the societies themselves.

The conference itself is quite an undertaking and incurs some expense to the society. In view of the fact that there are numerous committees from various organizations interested in this project, there has been formed a Governor's Task Force for Emergency Health Services of which we are a member. I feel that the future programs, in order to utilize all available services, should be handled and conducted by the Task Force, with this committee acting as liaison to the State Society. The committee would be glad to assist any society in obtaining such a program referable to trauma or emergency health services. I think that this would be the best function of this committee at the present time in addition to working closely with the Traffic Safety Committee on the Model Ambulance Law.

First Councilor District Professional Relations Committee
F. E. Utley, M.D., Chairman

The First Councilor District Professional Relations Committee handled only one disagreement between a patient and physician. It is believed the services of the committee kept the disagreement from growing and it is felt that the misunderstanding will be settled in the future.

Second Councilor District Professional Relations Committee
M. C. Hawkins, Jr., M.D., Chairman

The committee wishes to report that only one complaint against a physician in the Second

Councilor District has been filed by a patient.

The committee concluded, after thorough investigation, that the patient's complaints were without foundation.

Both the patient and the involved physician were so advised.

Fourth Councilor District Professional Relations Committee
S. C. Monroe, M.D., Chairman

There have been no cases referred to this committee in the past year. For this reason, there has been no need for a committee meeting or any action by the committee.

Fifth Councilor District Professional Relations Committee
J. B. Wharton, Jr., M.D., Chairman

The Professional Relations Committee of the Fifth Councilor District of the Arkansas Medical Society has been called upon three times during the period of 1970 for professional complaints within the local society.

It is pleasing that this is the smallest number of cases that have reached me in the many years that I have served on this committee and is certainly encouraging to feel that we are having a better relationship with our patients as a whole and with our colleagues.

Seventh Councilor District Professional Relations Committee
C. F. Peters, M.D., Chairman

The Seventh Conncilor District Professional Relations Committee handled several cases during the year 1970. All of the cases were settled in a satisfactory manner to both parties concerned.

Eighth Councilor District Professional Relations Committee
Richard M. Logue, M.D., Chairman

The Committee has stood ready at all times through the year to interview any cases which might be brought before it. It is indeed gratifying to report that no problems have arisen which have come to the atteniton of this Committee.

Report of the Council
C. C. Long, M.D., Chairman

The Council of the Arkansas Medical Society met on Sunday, August 16, 1970, and transacted the following business:

I. Commended Dr. William S. Orr, Jr., Ark-Pac Chairman, for increasing Ark-Pac membership from a low of 56 in 1967 to 149 in 1970.

II. Elected Dr. Rhys Williams of Harrison third vice president, replacing Dr. D. L. Owens, resigned.

III. Decided to take no action on a Mental Health Committee report recommending extension of health insurance coverage to include alcoholism, drug addiction and mental illness.

IV. Approved a group retirement plan for members of the Society proposed by PRO Services.

V. Established the following policies having to do with the Fee Committee:

A. Directed that sub-specialties be represented on the committee on a consultant basis upon invitation by the committee when a case in the sub-specialty is to be heard.

B. Established three-year terms of service for the committee with terms to end on April 30. It was agreed that service on the committee would be counted beginning on the anniversary date of 1971 and that prior service would not apply against the three-year maximum term.

C. Elected Dr. Charles Wilkins Chairman of the Committee.

D. Directed that the Fee Committee itself decide on allotment of terms of tenure among the members of the new committee.

E. Elected committee members for the various specialties and general practice.

VI. Nominated Dr. M. J. Kilbury, Jr., and Dr. William R. Scurlock for a position on the State Cancer Commission.

VII. Nominated Dr. Ben Saltzman for a place on the AMA Committee on Planning and Development.

VIII. Directed that the Medical Society Constitution be enforced in that only members and guests as set out in the Constitution be allowed to participate in Medical Society functions.

IX. Reveiwed various functions of the Medical Society whose costs have increased markedly in the past five years, with a view to deciding whether (1) the function was still serving the purpose for which it was originally planned and (2) whether the function was worth the increased cost.

A. Regarding the expenses of mailing the Journal to interns and residents, it was directed that the Society send an inquiry annually to each intern and resident receiving the Journal to ascertain his interest in continuing to receive it. The headquarters office is to discontinue the subscription if an affirmative reply is not received.

B. Donations to the Student American Medical Association, which have increased greatly in recent years, will be considered each year in light of growing budget problems.

C. Functions voted to continue were the free coffee bar at the Annual Session, senior medical student banquets, annual winter meetings, Emergency Health Conference, Chamber of Commerce dues (national, state and local).

X. Received notice of the increase in premium for the Arkansas Medical Society Physicians Group with Blue Cross-Blue Shield and approved the addition of optional benefits covering major medical care costs and intensive care unit costs.

XI. Heard a report from Dr. A. C. Bradford on the progress of the Drug Abuse Education Program of the Arkansas Medical Society.

XII. Voted to reaffirm Medical Society support of the licensing of ambulance drivers.

XIII. Gave tentative approval to placing the control of the treatment of tuberculosis under the State Health Department and directed that it be referred to the House of Delegates at the winter meeting for final action.

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The Council met on Sunday, October 18, 1970, and transacted the following business:

I. Elected Dr. Robert F. McCrary to serve on the Seventh Councilor District Professional Relations Committee in place of Dr. J. W. Kennedy, resigned.

II. Confirmed Executive Committee action designating Dr. Ben Saltzman to represent the Society at a meeting on Environmental and Public Health in San Antonio.

III. Directed Mr. Schaefer to attend an AMA meeting on quackery to be held in Scottsdale, Arizona.

IV. Voted to change the name of the Fee Committee to the Professional Services Review Organization to more closely coincide with government terminology.

V. Approved State Medical Board plans for the admission of foreign graduates to practice in Arkansas. Said plan is to include requirements for American experience or education prior to receiving a license.

VI. Approved a proposed state-wide kidney disease program and directed that county medical societies be so advised.

VII. Approved plans of the Annual Session Committee, including a luncheon for senior medical students during the meeting, a Monday evening party at the Vapors and the charging of a registration fee for non-members.

VIII. Voted to invite three junior medical students, three senior medical students and the president of the Arkansas Chapter of the Student American Medical Association to the first Council meeting of the Annual Session, as well as to all meetings of the House of Delegates.

IX. Approved the formation of a Health Manpower Commission with Dr. Francis M. Henderson and Dr. Lee B. Parker as Co-Chairmen, whose purpose would be to develop and bring in to the active health field additional manpower.

X. Council heard discussion of proposed legislation to license clinical laboratory personnel and referred the matter to the Legislative Committee for whatever action it deemed appropriate.

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The Council met on Sunday, November 22, 1970, and transacted the following business:

I. Heard reports of councilor district meetings which have been held in the second

and fourth districts. Each councilor was encouraged to hold similar meetings in his councilor district.

II. Referred a Washington County resolution on registered physician assistants to the Legislative Committee for whatever action it deemed appropriate and to the House of Delegates.

III. Approved plans by Ark-Pac to enlist more members and to encourage the Auxiliary to join.

IV. Endorsed the formation of a Health Careers Council by the Woman's Auxiliary to the Arkansas Medical Society and voted to contribute $500 to the new organization.

V. Approved Medical Society participation in a health planning program with the Extension Division of the University of Arkansas, Regional Medical Program, University of Arkansas Medical Center and the State Health Department.

VI. Took no action on a resolution presented at the meeting by the registered nurses association.

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The Council met on Sunday, January 31, 1971, and transacted the following business:

I. Approved the annual report of audit of the State Medical Board.

II. Asked the chairman of the Committee on Aging to represent the Society at a Conference on Aging, March 21, in Chicago.

III. After discussion, approved the budget proposed by the Budget Committee for 1971.

IV. Approved travel expenses for a representative to attend a conference on Medicine and Religion in Chicago.

V. Authorized the sending of five official representatives to the AMA-AMPAC meeting in Washington March 13th and 14th.

VI. Referred a request for $840 for the purchase of equipment for use in a high school education program to the newly-formed Health Careers Council.

VII. Heard discussions of bills in the Legislature seeking full privileges for osteopaths and a bill sponsored by the Medical Society embodying compromise with the osteopaths allowing them to practice medicine after a year of further training.

VIII. Decided to use more care in inviting guests to the Council meetings in fear of jeopardizing the privileged nature of those meetings.

IX. Endorsed a report of the Committee on Maternal and Child Welfare recommending licensing and inspection of child day care facilities by the State Health Department.

X. Discussed AMA Medicredit Plan for national health insurance and requested more information on the subject.

XI. In view of the fact that medical technologists had introduced a measure in the Legislature which had not been approved by the Medical Society, the Council voted to oppose it and any other measure to license medical technologists at this time.

XII. Received for information a Union County Medical Society resolution announcing that it would not pay AMA dues until the AMA explains its policies which seem to be at odds with the policies of Union County.

XIII. Voted to contribute $500 to Ark-Pac for educational purposes.

XIV. Approved a statement by the Arkansas Medical Society Professional Services Review Organization condemning the refusal of the Department of Health, Education and Welfare to allow Blue Cross-Blue Shield to advise a physician what he could charge under the usual, customary and reasonable fee arrangement.

XV. Elected Dr. John V. Busby to represent psychiatry on the PSRO, succeeding Dr. Frank M. Westerfield, resigned.

XVI. Directed the chairman to appoint a committee to meet with a committee from the Medical School to discuss various problems.

XVII. Recognized the continuing excellent performance, development or higher skills and the assumption of more responsibilities by Miss Leah Richmond of the headquarters office and voted to change her title from Administrative Assistant to Assistant Executive Vice President.

Report of the Executive Vice President

Mr. Paul C. Shaefer

The role of organized medicine becomes increasingly important with each passing month — and proportionately more difficult.

The many government health programs generate a veritable shower of health proposals, grant possibilities, conferences, hopes and alarms. The interest, even the survival, of the private practice of medicine dictates that medical organization must respond to every stimulus with vigor, intelligence and cold-blooded objectivity. Medicine has, and must continue, to give leadership to every conception of health care even though we know that most will be stillborn.

Such participation requires the sacrifice of time and energy on the part of the members of the Society and increasing expense on the part of the organization.

It is gratifying to report increased activity on the part of many of the Society's committees. The increase is attributed to the annual winter meeting. Many committees are using the occasion to get together and plan several month's activities, which, with the help of the assistant to the executive vice president, have resulted in an increasing amount of committee achievement.

The Emergency Health Conference co-sponsored by the Society and the rather extensive drug abuse education program undertaken at the request of the Arkansas Legislative Council have proven effective public relations vehicles. Society assistance in promoting television appearances by Society members has resulted in a great deal of good exposure for the medical profession.

The Society still offers the services of the "Specialty Desk" to the specialty organizations of the State. Only three of thirteen organized specialties have taken advantage of the offer. It is believed that participation by the specialties in the services offered by the Arkansas Medical Society would result in a more cohesive and thus a stronger medical profession. The available quick, efficient administrative services at a nominal cost should make the specialty sections more active and effective with very little effort on the part of the officers of the specialty sections. Members are encouraged to urge their specialty sections to join the State Society's "Specialty Desk" services.

Budget Committee

W. R. Brooksher, M.D., Chairman

The Budget Committee submitted the following budget for 1971. It has been approved by the Council.

INCOME

Budget Item		1971 Budget
Membership Dues		$113,900.00
Journal Advertising		
Local	$ 5,000.00	
National	25,000.00	30,000.00
Booth Income		7,100.00
Annual Session Income		2,000.00
AMA Reimbursement		800.00
Miscellaneous & Rosters		250.00
Interest on Government Securities		8,500.00
Retirement (Employee contribution)		400.00
Specialty Desk		650.00
		$163,600.00

EXPENSES

Salaries		
Society	$ 47,989.00	
Public Relations	9,150.00	
Journal	7,817.00	
Exhibit	185.00	$ 65,141.00
Travel & Convention		
Society	12,400.00	
Public Relations	2,200.00	
Journal	400.00	15,000.00
Taxes		
Society	1,650.00	
Journal	300.00	
Exhibit	550.00	2,500.00
Retirement		
Society	11,869.00	
Journal	1,619.00	13,488.00
Stationery & Printing		
Society	1,230.00	
Public Relations	50.00	
Journal	180.00	
Exhibit	40.00	1,500.00
Office Supplies & Expense		
Society	3,470.00	
Public Relations	50.00	
Journal	480.00	4,000.00

Telephone & Telegraph		
Society	1,927.00	
Public Relations	600.00	
Journal	348.00	
Exhibit	25.00	2,900.00
Rent		
Society	5,280.00	
Journal	720.00	6,000.00
Postage		
Society	2,770.00	
Public Relations	100.00	
Journal	1,100.00	
Exhibit	30.00	4,000.00
Insurance & Bonds		
Society	2,925.00	
Journal	625.00	3,550.00
Auditing		
Society	485.00	
Journal	65.00	550.00
Council Expense		1,100.00
Journal Printing		25,000.00
Annual Session		
Society	6,700.00	
Exhibit	1,800.00	8,500.00
Winter Meeting		1,200.00
Senior Medical Day		1,200.00
Dues & Subscriptions		
Society	1,936.00	
Journal	264.00	2,200.00
Gifts & Contributions		
Society	1,450.00	
Journal	100.00	1,550.00
Woman's Auxiliary		1,200.00
Legal Services		
Society	3,700.00	
Journal	500.00	4,200.00
Special Committee Expense		
Society	88.00	
Public Relations	12.00	100.00
Rural Health		500.00
Miscellaneous		
Society	34.00	
Public Relations	10.00	
Journal	6.00	50.00
Freight & Express		
Society	14.00	
Public Relations	10.00	
Journal	6.00	30.00
Office Equipment		500.00
Specialty Desk		65.00
		$166,024.00

Report of the Arkansas State Medical Board
January 1, 1970 - January 1, 1971
Joe Verser, M.D., Secretary

The Secretary of the Arkansas State Medical Board makes the following report of the activities of this Board since the last meeting of the Arkansas Medical Society:

The officers and members are as follows:

Hugh R. Edwards, M.D., Searcy, Chairman

Ross Fowler, M.D., Harrison, Vice-Chairman

Joe Verser, M.D., Harrisburg, Secretary-Treasurer

Frank M. Burton, Hot Springs, Member

Earle D. McKelvey, M.D., Paragould, Member

John F. Guenthner, M.D., Mountain Home, Member

William A. Snodgrass, M.D., Little Rock, Member

George F. Wynne, M.D., Warren, Member

C. Stanley Applegate, M.D., Springdale, Member

Eugene R. Warren, Little Rock, Atttorney

A yearly financial report of the Board's activities, prepared by Johnston, Freeman & Company, Certified Public Accountants, was sent to and approved by the Council of the Arkansas Medical Society.

The Board investigated every case of violation of the Medical Practices Act reported to the Secretary during the year. Following is a summary of the Board's proceedings.

Physicians registered for 1970:	
Resident	1,792
Non-resident	1,343
Physicians licensed by examination	85
Physicians licensed by reciprocity	57
Physicians certified to other states	144
Licenses revoked for non-payment of annual registration fee	13
Licenses suspended for non-payment of annual registration fee	44
Licenses revoked for violation of Medical Practices Act	2
Cases convicted for violation of Medical Practices Act	1
Cases pending for violation of Medical Practices Act	1
Injunctions issued	1

ARKANSAS STATE MEDICAL BOARD
BALANCE SHEET
June 30, 1970

ASSETS			
Cash in banks—			
Bank of Weiner, Weiner, Arkansas			
Certificate of Deposit #362		$ 8,553.71	
Certificate of Deposit #392		2,746.35	$11,300.06
Bank of Harrisburg, Harrisburg, Arkansas			
Checking Account		21,624.65	
Certificate of Deposit #519		12,999.70	34,624.35
Copying machine			1,478.57
TOTAL ASSETS			$47,402.98
LIABILITIES AND SURPLUS			
LIABILITIES			
Withholding and FICA taxes deducted and unpaid for quarter ended June 30, 1970			$ 245.62
SURPLUS			
Balance at beginning of year		$38,218.73	
Add: Excess of receipts over disbursements for year ended June 30, 1970	$7,066.34		
Fixed assets included in disbursements	1,478.57		
Decrease in payroll taxes withheld but not remitted at June 30, 1970	393.72	8,938.63	47,157.36
TOTAL LIABILITIES AND SURPLUS			$47,402.98

Summary of Arkansas State Department of Health Activities — 1970

John T. Herron, M.D., State Health Officer

Public health problems we now face make those of the past seem pale. Air, land, water and life pollution, coupled with drug abuse, alcohol, cancer and the implementation of health services, appear to be as confusing as they are complex. To combat this surge of health needs, the Arkansas State Department of Health has dedicated itself to correction of health problems in Arkansas through efforts of personnel and new wide-range programs.

The BUREAU OF LOCAL HEALTH SERVICE is composed of the Divisions of Communicable Diseases, Veterinary Public Health, Heart Disease Control, Emergency Health Services, Chronic Disease Control, Public Health Nursing, Maternal and Child Health, Radiological Health, Meat Inspection; City, County and District Health Units.

Committees, councils and advisory bodies define and formulate new concepts and methods of improving or re-defining established services and innovate administration of related services and programs.

The Office of Personnel is responsible for recruitment and coordination of all health personnel records with Offices of the State Merit System and State Administration.

The Division of Accounting is responsible for Business Management, Accounting and Data Processing activities.

The DIVISION OF VETERINARY PUBLIC HEALTH received many requests for assistance from physicians, veterinarians, Local Health Departments, government agencies and individual citizens concerning animal diseases which are transmissible to man.

Since July 1, 1969, Arkansas has had 64 cases of rabies in animals. Bites incurred by humans totaled 1,419. Because of this large number of animal bite exposures, 3,016 doses of duck embryo rabies vaccine were administered to individuals.

The ARKANSAS ANIMAL MORBIDITY REPORT presented animal disease data with an emphasis on diseases which might be harmful to man. Special reports on brucellosis, equine encephalomyelitis, leptospirosis, rabies and others, are sent to the Center for Disease Control, Atlanta, Georgia.

The DIVISION OF COMMUNICABLE DISEASES coordinates Tuberculosis, Immunization, Venereal Disease and Communicable Disease Programs.

Tuberculosis programs utilized the PPD skin test and chest X-ray to expedite case-finding; diagnostic clinics functioned in 62 counties. Direct medical care, which proved that hospitalization near home, and for the minimum time necessary, is advantageous to both patient and State, was provided by the Jefferson Hospital Treatment Program at Pine Bluff. Local Health Departments provided follow-up service and arranged for prescribed drugs for non-hospitalized tuberculosis patients.

As the venereal disease incidence dropped, so did funds and personnel. The reported incidence again is on the rise. Epidemiological investigations were conducted while maintaining surveillance of infectious diseases (Gonorrhea, Syphilis, Malaria, Hepatitis and others).

Immunization efforts were carried on by contacting parents of newborn infants and urging immunization of their babies. Based on the cyclical character of rubella, another large increase in cases can be expected in the early 1970's unless large scale immunization takes place immediately. To meet this challenge, 26 requested programs were set up in which over 65,000 children between 1 and 11 years of age received rubella vaccine.

Physical therapists of the DIVISION OF CHRONIC DISEASE CONTROL used outstanding improvised equipment of inexpensive materials which proved highly effective in home care of the patient. Hand and arm splints, plastic jugs containing varying amounts of sand and weight sacks were added as a patient tolerated greater resistance in the rehabilitation program.

Dextrostix was the screening method used on patients at a high risk for diabetes, followed, if indicated, by a postprandial blood sugar. Thirty cases were confirmed by this method from a total screening of 2,022 patients.

Convenient mailing kits were used in detection of hemolytic streptococcus. The 3,116 tests done in 1970 produced 652 positive findings.

Since legislation has not been enacted to establish a training and licensure program of ambulance personnel, training programs were conducted by the DIVISION OF SAFETY on the basis of volunteer participation. Of the 500 participants in nine schools conducted in cooperation with local Medical Societies, 103 individuals were ambulance personnel. Eleven Emergency Ambulance Service applications were reviewed and approved. Five were funded. Funeral homes, commercial firms, hospitals, police departments, fire departments, municipal and volunteer services account for 137 ambulance services in Arkansas.

Preparedness programs of the DIVISION OF HEALTH MOBILIZATION effectively utilize health resources on State and local levels in any major disaster. Objectives are accomplished through the Emergency Medical Stockpile, Emergency Health and Medical Planning, Medical Self-Help and Cardiopulmonary Resuscitation.

Thirty-five community hospitals were affiliated with "Packaged Disaster Hospitals" and "Hospital Reserve Disaster Inventories." During the past year, 13 Packaged Disaster Hospital familiarization and orientation exercises were conducted. The Division has coordinated its planning efforts with the State Office of Civil Defense, Civil Defense University Extension Program, State and County Medical Societies, State Hospital Association and other agencies to develop an overall Emergency Operation Plan for times of disaster.

Medical Self-Help Training, now an established course in many schools, was completed by 20,435 individuals. The Cardiopulmonary Resuscitation course was presented to 614 students throughout the State.

Recruitment of nurses, their orientation and continuing education, preparation of manuals on nursing procedures and policies, and provision of nursing services to implement programs of the Health Department in the State are the major services of the DIVISION OF PUBLIC HEALTH NURSING.

Public health nurses made 103,661 home and office nursing visits to instruct individuals and/or families in proper care and/or treatment of patients. Nurses held 6,115 clinics in which 7,453 diptheria-tetanus, 17,736 pertussis, 31,474 polio, 2,913 typhoid and 27,912 rubeola immunization series were completed; 24,168 smallpox vaccinations were given. Total attendance at these clinics was 260,046. In 61 mass immunization clinics, 67,955 individuals received measles (rubeola and/or rubella) immunizations. Over 100,000 tuberculin skin tests were given.

The DIVISION OF MATERNAL AND CHILD HEALTH placed the utmost emphasis on care of the mother during both the prenatal period and conceptional years. In direct patient care, 6,172 maternity patients were examined and counseled. Family Planning Clinics were located in 58 counties; 7,066 patients received service in the 1,452 clinics held at 68 facilities. Two special Family Planning Projects supplementing these Clinics were designed to improve health education and follow-up care of family planning patients.

A special Project in Jefferson County, designed to make possible discharge of premature babies earlier than the usual date, gives the family full benefit of the family-child relationship in the early formative years. A secondary benefit is decreased hospital costs. Public health nurses give careful follow-up service.

Medical, social, psychological, dental, speech, vision and audiology evaluations and treatments are a portion of the comprehensive program of the Handicapped Child Center (formerly the Child Development Center and the Speech and Hearing Center). Five hundred fifty-six evaluations were made. Counseling with the family in regard to evaluation results in a contribution to the overall happiness of the family and progress of the child. Plans are instituted with each family to find the method best suited to their child so that he may lead a happy, productive life.

Nutritional services were available regularly in 28 of the 75 Arkansas counties. At least 50 counties received services in the form of diet sheets or manuals. There were 1,914 nutritional services given to mothers; infants and children received 3,614 direct nutritional services; 2,133 families received nutritional services regarding the USDA Food Program; 1,251 diet counseling services were given to individuals on modified diets.

Nine counties (Pulaski, Jefferson, Lonoke, Grant, Garland, Saline, Perry, Arkansas and Conway) administered comprehensive care to poverty level mothers and children with high risk problems in delivery, or infant morbidity and mortality. The Maternity and Infant Care Project had a case load of 1,052 patients.

Activities of the DIVISION OF RADIOLOGICAL HEALTH concentrated on inspection of dental X-ray machines, establishment of environmental surveillance sampling stations and sample collections around Arkansas Nuclear One at London.

August 6, 1969, the Blood Alcohol Program established a Blood Alcohol Testing system in cooperation with the Highway Safety Program. A use-profile for pesticides used in Arkansas was set up by the Pesticide Residue Program on, or about July 1, 1969, to ascertain problems related to use of pesticides. The Food Chemistry, Drug Analysis, Meat and Meat By-Product, Water Chemistry, Pesticide Residue and Blood Alcohol Laboratories ran 16,755 tests on 2,035 samples of which 332 were violative samples.

Under supervision of the DIVISION OF MEAT INSPECTION, 197,438 cattle, hogs, sheep and goats were slaughtered during the initial 21 months of the Arkansas State Meat Inspection Program; 139,407,678 pounds of red meats received the Arkansas State Inspected and Passed mark of wholesomeness for consumption; 1,266,170 pounds of inedible offal, diseased, adulterated and unwholesome meat and meat products were condemned and destroyed.

The amount of red meats inspected and passed was approximately 35 percent of the total red meat diet in Arkansas. It is estimated that 50 percent of Arkansas' red meat per capita will be protected by the Arkansas State Meat Inspection Program, an additional 35 percent by Federal inspection.

At this time, 66 plants are under full-time Arkansas inspection; 22 plants phasing-in toward this goal; 46 custom exempt plants; 12 undeclared plants.

The BUREAU OF DENTAL HEALTH reported that fluoridation of water supplies reached 788,000 people in 96 communities. Four others await installations. Lectures, teaching assignments, films and literature were provided upon request. In direct care services to low income families not cared for by other State and/or Federal Programs, 18 part-time dental clinicians gave dental services to 1,206 individuals.

The BUREAU OF VITAL STATISTICS recorded a total of 33,401 live births, a rate of 1869.8 per 100,000 population. Deaths totaled 20,573, a rate of 1151.7 per 100,000. Fetal deaths numbered 600, a rate of 17.9 per 1,000 live births.

The ten leading causes of death for 1969 were diseases of the heart; malignant neoplasm (cancer); cerebrovascular diseases; accidents, influenze and pneumonia; other diseases of the circulatory system; bronchitis, emphysema and asthma; diabetes mellitus; certain diseases of early infancy; arteriosclerosis.

In calendar year 1969, 22,818 marriage records were received. Reported divorces and annulments granted accounted for 9,152 registrations during the same period.

An average of 682 copies per work day, or 160,822 photostat copies of vital events, were issued in 1969. The grand total of all vital events was 6,789,403.

Thirteen individual sections constitute major operating units of the BUREAU OF LABORATORIES. Each laboratory's workload increase varied from 3 to 118 percent (279,416 tests were run on 187,059 specimens).

The Arkansas Laboratory Improvement Project was implemented and 95 of 160 laboratories participated in the Program. Test samples (18,-

553) were sent to these laboratories to compare results in serology, hematology, clinical chemistry and microbiology. An estimated 130,000 forms, analyses and reports were developed and handled in this Program.

The BUREAU OF ENVIRONMENTAL ENGINEERING approved public water utility, public sewerage system and swimming pool plans which represented an estimated construction cost of $15,040,000. Twenty-eight towns constructed new water supply systems; three built new water treatment plants; seven installed new sewerage systems; six built new sewerage treatment plants.

Four hundred forty water utilities operator examinations were given and 146 licenses were issued. Sixty waste water operator examinations were given and 50 licenses were issued.

Routine services included interpretation of 940 public water supply chemical analyses and the processing of 29,054 public water supply bacteriological reports.

The population served by public and semi-public water supplies totaled 1,236,403; by public sewerage systems, 1,070,357.

One hundred fifty-nine institutions, parks, recreational and industrial water supplies and 608 swimming pools were under supervision. Three hundred ninety-six pool and 94 narube toilet permits were issued.

Enforcement activities of the DIVISION OF MILK AND DAIRY PRODUCTS were carried out in 1,410 inspections of dairy products establishments. There were 3,748 dairy product samples collected; 183 plant and farm water samples; 20 milk shed ratings.

The DIVISION OF FOOD AND DRUG CONTROL supervised destruction of 236,265 pounds of food unfit for human consumption; made analyses on 445 drug samples; received more than 15,000 copies of narcotic drug orders; made 109 drug investigations and audits; destroyed under supervision 41,592 unit doses of unused or out-dated prescription drugs.

The DIVISION OF PLUMBING made investigations concerning license complaints and Code violations. There were 247 investigations, 1,079 inspections.

Licenses must be renewed annually. Fifty-four Master applicants and 58 Journeyman applicants were examined. Licenses were issued to 1,151 Master Plumbers and to 1,014 Journeyman Plumbers; 569 Apprentices were registered.

The fully equipped Testing Laboratory made it possible to expand the reviewing and testing of numerous new plumbing materials.

The DIVISION OF PUBLIC HEALTH EDUCATION participated in activities concerning the public relations aspect of health problems. Materials, lectures and tours were provided upon request. Monthly and weekly television segments helped spur educational endeavors.

A pamphlet, periodical and monograph library, also audi-visual equipment for use by State Department of Health staff, were maintained by the Division.

Federal Aid Programs for Construction and Modernization of Hospitals and Medical Facilities, Construction of Community Facilities for the Mentally Retarded and Construction of Community Health Centers are administered by the DIVISION OF HOSPITALS AND NURSING HOMES. Certification of hospitals, independent laboratories, home health agencies, skilled care nursing homes, intermediate care and extended care facilities is a major activity of the Division under contracts with the Social Security Administration and the Department of Public Welfare.

The Division of Hospitals and Nursing Homes also licenses hospitals, nursing homes and nursing home administrators; administers Act 122 of 1967 which requires that buildings constructed with public funds be designed so that they can be entered and used by the physically handicapped; assists health care facilities in developing a program for capital expenditures for replacement, modernization and expansion to be in accordance with acceptable planning standards.

The Arkansas Hill-Burton Program had another progressive year. Nine new projects added 230 beds in hospitals, nursing homes and rehabilitation facilities for the aged.

The Child Study Center of Greater Little Rock, constructed in affiliation with the University of Arkansas Medical Center, is designed to train professional psychiatric manpower in the field of child development. The Jonesboro Community Mental Health Center and the Craighead County Public Health Center, part of the Northeast Arkansas Services Center, also are under construction.

Under the Medicare program, the Division encountered the major problem of a shortage

of professional medical personnel while resurveying 98 hospitals, 42 extended care facilities, 75 home health agencies, 14 independent clinical and pathological laboratories. These facilities were resurveyed to certify that they were in substantial compliance to participate in the Health Insurance Program under the Social Security Administration.

The licensure of hospitals and nursing homes in Arkansas resulted in the licensure of 215 nursing homes with a total of 14,511 beds; 106 general type hospitals with a total of 7,921 beds; 27 other type facilities such as infirmaries, rehabilitation facilities, orthopedic rehabilitation centers, psychiatric and tuberculosis hospitals.

The Division is working to establish a training program through which administrators may receive permanent licensure status. All administrators must be licensed on a permanent basis before January 1, 1972.

Report of AMA MEETING
November 29 - December 2, 1970
Boston, Massachusetts
Purcell Smith, Jr., M.D., Delegate

This report is a summary of the more significant actions of the House of Delegates at the November 1970 Clinical Convention. There were a few pickets, but no disruption of the meeting.

In his presidential address, Dr. Bornemeier encouraged the AMA to take a leadership role in development of neighborhood medical clinics which were "fast becoming the focal point for delivery of most medical services". He stated that AMA leadership is vital "so that we may ensure that medical clinics remain a part of medical practice". Other comments in Dr. Bornemeier's speech included: 1) Creation of a program to assist physicians in setting up adequate health facilities for group or solo practice, 2) Inducements such as low-cost federal loans or Hill-Burton type grants to encourage doctors to establish private practice groups in ghettos, 3) A periodic survey by AMA of manpower needs in each specialty, thus helping a student in choosing a specialty that is in demand, and helping balance those specialties in short supply, 4) Review of the comments he made in his inauguration speech regarding shortening the medical education to six years, and a modification in the training of specialists.

The House of Delegates considered thirty-two (32) reports and seventy-one (71) resolutions. Some of the major items discussed are listed below:

1) ABORTION. After some debate, the policy statement adopted at the 1970 annual convention was reaffirmed.

2) MEMBERSHIP. The House created a new class of membership for interns and residents, and such members can elect a delegate and alternate to the House. Dues will be twenty dollars ($20.00) annually. The House also provided for direct membership for physicians in the Veterans Administration, non-uniformed physicians of the Public Health Service, and other full-time civilian physicians employed by federal agencies who are ineligible for membership in a component medical society.

3) PEER REVIEW. The House reaffirmed its approval of the peer review organization, as contained in the AMA Medicredit Program and urged that "all components of organized medicine give energetic support to furthering the effective implementation of peer review". It was pointed out that the Social Security bill regarding Professional Standards Review Organization (PSRO) had been modified by the Senate Finance Committee; most of the items to which AMA had objected were modified by the Finance Committee. The House of Delegates directed the Board of Trustees to continue to seek appropriate changes in the bill.

4) PROFESSIONAL IDEALS. The professional ideal of medical service to all, whether able to pay or not, affirmed by the House of Delegates in 1934 was emphatically reaffirmed in Boston. Interest and carrying charges on unpaid bills, and refusal to see a patient because the balance was too high, were criticized.

5) HEALTH OCCUPATIONS. The terms "ancillary" and "paramedical" will no longer be used in AMA statements, but will be replaced by the term "allied". The House approved a Board of Trustees report dealing with licensure of health occupations. One of the recommendations in that report was a nationwide moratorium on licensure of any additional health occupations at this time. Meanwhile a national "task force" to study the problems of licensure could be working.

6) MISCELLANEOUS. Atlantic City was approved as the site of the 1975 annual con-

vention, but only tentatively, with a final decision to be made on the basis of experience in Atlantic City for the annual convention in 1971. Honolulu was approved as the site of the 1975 Clinical Convention, and Dallas will be the site of the 1976 annual convention.

The House urged expansion of third party coverage for out-of-hospital care; it also urged that the insurance industry write their contracts to cover the newborn from the moment of birth, instead of after a waiting period. Strong support was given to the SAMA-MECO project (Student American Medical Association Project for Medical Education and Community Orientation) as an adjunct to undergraduate medical education. Constituent medical societies were asked to consider supporting the project in their states. Constituent associations were asked to seek appropriate remedial state legislation in the field of professional liability, and the Committee on Professional Liability was urged to continue exploring all aspects of the professional liability problem.

Sub-Committee on Industrial Health
Roy I. Millard, M.D., Chairman

The Sub-Committee on Industrial Health is composed of Drs. Roy I. Millard, Chairman, William B. Harrell, James C. Bethel, Gerald K. Patton, William L. Steele and H. Blake Crow. Dr. Hal Dildy, who is working full time in industrial practice, volunteered to give us the benefit of his knowledge and advice in making our studies and report.

This committee was unable to find very much in the way of any precedence for the activities of this committee. We found ourselves exploring a relatively unexplored forest and the report is very incomplete. However, we do feel that the importance of this committee cannot be overstressed and that the Society should develop through this committee and other committees of the Society a closer relationship not only with the industrial people of our State but also with the Workmen's Compensation Commission and with the Arkansas Industrial Development Commission.

By working with the Compensation Commission and the AIDC we may be able to develop some programs that will be of real benefit not only to the industries but to their employees and also to the medical profession in the State.

This committee recommends that every doctor make himself a personal representative of the Arkansas Medical Society in his relationship with industrial employees as well as with the management of the many fine industries that have come to our state. We feel that this is important whether or not the particular physician is considered to be the company doctor in his town.

PRE-EMPLOYMENT EXAMINATIONS — It is recommended that all doctors encourage industrial companies to have pre-employment examinations for their employees and that the doctors make themselves available for these examinations. The requirements in these pre-employment examinations vary widely with the various companies. Perhaps some uniformity might be developed over the years. At present, however, it behooves us to try to follow the wishes of the industrial owners but to let them know of any suggestions we may have as to the things that should be considered in a pre-employment physical examination. Certainly the examination should include vision, audiogram, a look for gross obesity, history of previous back injury or disease or of neuropsychiatric disease. Hernias should be carefully excluded in the pre-employment physical. The question of pre-employment back x-rays is one that is open to discussion but in many cases, particularly where heavy manual labor is involved, this committee feels that a pre-employment back x-ray is worthwhile.

Permanent tetanus immunizations should be advised in all cases. The question of influenza vaccine is one for individual consideration but the committee recommends that doctors make themselves available to give this to all employees in case the company approves.

The committee recommends that every physician try to establish good relations with the personnel services of the industries in his area. We also recommend that each physician become familiar with safety programs, Philosophies in Industry, Lost Time Injury, USA Standard 216, and Guide to the Evaluation of Permanent Impairment. These can be obtained from the American Medical Association.

It is also important to become familiar with the work of the Workmen's Compensation Commission and to have a copy of the Workmen's Compensation Laws and Rules of the Commission which can be obtained from the Workmen's

Compensation Commission. It is also important to know something about the functions of the State Bureau of Labor.

Every doctor who is involved in the treatment of patients in industry should become familiar with the work environment, manufacturing process and the physical requirement of particular jobs and with materials handled and plant terminology. A periodic visit to the plant is a good investment.

Prompt reporting of any injuries to the proper insurance agency and to the Workmen's Compensation Commission is essential in maintaining good relations with the industry.

For physicians particularly interested in industrial medicine, the Journal of Occupational Medicine is well worthwhile. This journal is the official publication of the Industrial Medical Association and is published by Charles B. Slack, Inc., 6900 Grove Road, Thorofare, New Jersey 08086.

Sub-Committee on Liaison with the Woman's Auxiliary
Amail Chudy, M.D., Chairman

The following is a summary of the committee meetings with the Auxiliary of the Medical Society.

The most important meeting of the year with the Auxiliary of the Arkansas Medical Society was held at the mid-winter meeting at the Coachman Inn in Little Rock.

At this time all members of the ladies auxiliary expressed a desire and wish to be of more help to the Medical Society. Each and every member present stated that they were willing to be of more help to the Medical Society; however, for some reason, the physicians had not called upon their wives and the committees on which they serve to help in their many chores.

They are desiring to do any of the foot work that could be done by them. They are willing to take over the Arkansas Medical Society Public Relations program in any way they can be of service to their organizations.

It was indeed an honor to see the enthusiasm with which the female part of our Medical Society is endeavoring to help the Medical Society. I humbly believe that any project that we may offer these ladies would be completed in near record time and that we, perhaps, have lost sight of their willingness to serve and help their physician husbands.

Committee on Arrangements for Annual Session
Winston K. Shorey, M.D., Chairman

The Annual Session Committee met on Sunday, September 13, with President Kennedy, Executive Vice President Schaefer, and Miss Richmond also in attendance. A report from a committee made up of past annual session chairmen was reviewed. This report made suggestions for improving the annual session. Plans within the authority of the Annual Session Committee were made, and recommendations requiring approval of the Council were agreed upon.

Individuals were nominated to take responsibility for specific activities at the annual session, and provision was made to contact these individuals requesting that they assume the respective responsibilities.

The theme, "Current Management of Common Problems", was selected for the general scientific program. It was agreed that the scientific program should be provided by the faculty of the University of Arkansas School of Medicine, supplemented by guest speakers invited by the several specialty groups.

The schedule of events to occur at the annual session was prepared.

At a subsequent meeting of the Council of the Arkansas Medical Society, certain recommendations of the Annual Session Committee were submitted for Council action. These included: 1) the hosting of a luncheon for senior medical students on Monday by the Arkansas Medical Society, 2) a change in the Monday evening social event to make this a dutch treat affair rather than one conducted through selling tickets at the registration desk, 3) the charge of a fee to non-members of the Society for admission to the scientific program and exhibits.

At the time of preparation of this report, preparations for the Annual Session appear to be progressing well. The Arkansas Medical Society is greatly indebted to Executive Vice President, Mr. Paul Schaefer, and to Miss Leah Richmond for the effective and efficient manner in which they have handled preparations for the Annual Session.

Report from the School of Medicine

Winston K. Shorey, M.D., Dean

This annual report from the University of Arkansas School of Medicine will present briefly our experience following a major change in the curriculum which was implemented in the fall of 1969. This change occurred following an intensive study by the Curriculum Committee and the faculty as a whole.

The former curriculum was structured upon four equal years, each 36 weeks in length. The first year was devoted to Anatomy, Physiology and Biochemistry. The second year was devoted primarily to Microbiology, Pharmacology, and Pathology. In addition to the three major basic science courses, the second year also included a course in statistics, a course in physical diagnosis, and minor introductory courses to clinical medicine. The third year was the inpatient clinical clerkship year during which a student rotated through the several clinical services learning the various fields of medicine as a participant in patient care. The fourth year was another clerkship year with rotations through clinical services similar to those of the third year except that activities were in the outpatient clinics of the hospital rather than at the bedside.

There was considerable question regarding the productivity of the fourth year in terms of information gained on the part of the student relative to the amount of time consumed.

The objectives in making a change in the educational program included: 1) earlier exposure of students to patient care, 2) condensation of the great amount of medical knowledge available into a basic program to be undertaken by all future physicians, 3) opportunity for students to study in depth areas of medicine of special interest to them as they look forward to their future careers.

Objective number 1 above is self-explanatory and needs little further elaboration. Students enter medical school with the desire for becoming physicians. They expect to be involved with basic sciences during the early part of medical school, but intense concentration in these fundamentals with little apparent connection between them and clinical medicine has a dampening effect upon student enthusiasm. A student is stimulated if from time to time he can see where his hard work is leading him.

Objective number 2, the condensation of medical knowledge, is a controversial one because opinion varies greatly as to how much information all physicians should have regardless of their future field of medical practice. However, agreement can usually be reached that all future physicians do not need to learn all of the intricacies of all the basic sciences, nor all aspects of all the clinical specialties in medicine. Starting from this point of agreement, decisions have to be made regarding the content of a general education in medicine for all medical students.

Objective number 3, provision for in depth study in special areas, is based on the concept that specialization is a reality that cannot be set aside as nonexistent. Within this concept is a clear understanding that family practice must be treated as an individual specialty in its own right. Having arrived at these understandings, it becomes readily apparent that the interests of a student are well served through provision of opportunity for him to elect a significant portion of his educational experience, the student having determined the field of medicine which interests him most. It should be emphasized that this provision does not preclude the election of a general course of study in the fourth year by a student who is undecided relative to his future career. However, experience indicates that the majority of our students have made a career selection by the end of the third year.

To meet the above objectives, the following changes in the curriculum were made. Time allotted to each of the basic science courses in the first year was decreased, and a new course entitled "Introduction to the Patient" was added. The total time allotted to the first year continued to be 36 weeks. A three month vacation period between the first and second year was continued. The time allotted to the basic science courses in the second year was decreased and the course entitled "Introduction to the Patient" was continued into the second year. The total time allotted to the second year was decreased to 27 weeks. The third year was allocated entirely to clinical clerkship and expanded to 48 weeks. The fourth year was made completely elective, a student having the opportunity to select elective courses under the supervision of a faculty counselor. The academic units of the School of Medicine offer a wide variety of electives from which the student can

put together his senior year. The total of his electives must be equivalent to a minimum of 36 weeks, but he can elect additional courses if desired. The senior student has the option of beginning his senior year immediately upon completion of the junior year, or the taking of a summer vacation.

After a year and a half of operation with the new curriculum, we feel that the program in its overall has been successful. The new course, "Introduction to the Patient", introduced into the freshman year was revised for the current year following the initial experience. Further revisions are indicated from our experience this year. By the end of the 48 week clerkship year, evaluations indicate that our students do have the general fund of information essential for all physicians. The elective fourth year has been the most successful and stimulating portion of the new curriculum. Both students and faculty have been enthusiastic. While under the old curriculum senior students frequently had time on their hands and regarded the fourth year as somewhat of an anticlimax after the third inpatient clerkship year, senior students now are much busier, are uniformly pleased with the program, and are concerned with obtaining the most education possible during their elective opportunity. About sixty per cent of seniors elect more than the minimal requirement of 36 weeks.

The new curriculum is providing certain dividends which were not completely foreseen at the time of its implementation. A number of students are beginning their senior year immediately following the third year, and are completing all requirements for the M.D. degree by March of the senior year. These students are commencing internship three months earlier than is traditional and, as a consequence, have the opportunity for shortening the time involved in becoming practicing physicians. The potential exists for utilization of the elective senior year for further shortening of the period of time between entry into medical school and commencement of medical practice.

The elective senior year provides opportunity for education and training in family practice which did not exist within the framework of the old curriculum. Currently, senior students are electing courses offered by the Division of Family and Community Medicine. Serious consideration is being given to a further change which would permit a student who is committed to family practice to elect the first year of family practice residency as his senior year in medical school.

House of Delegates Business Affairs

The resolutions, annual reports and other business items printed below are brought to the attention of individual members and the county medical societies. The items printed here represent those received in time for publication in advance of the meeting. All business items will be referred to reference committees. Open hearings by the reference committees are to be held on Sunday afternoon, April 25th, immediately following the session of the House of Delegates. All members of the Society are urged to participate in the open hearings of the reference committees. The reference committees want expressions of opinion from the membership.

Constitutional Amendments

The following proposed amendments to the Constitution and By-Laws were approved by the House of Delegates during the 1970 meeting. They will be presented to the House of Delegates for final vote at the meeting on Sunday, April 25th.

1. Amend Chapter VIII, Committees, Section 1 (A) 3 to delete the words "Liaison with Public Health Department." This would serve to eliminate the Sub-Committee on Liaison with the State Board of Health as recommended at the 1969 Annual Session.
2. Amend Chapter 1, Membership, Section 7 (Military Members) to read as follows:
   Section 7. (A) Regular members of the Arkansas Medical Society who are in the service of the armed forces of the United States, not as career officers, may be classified as military members, and carried on the rolls of their re-

spective county societies as such. Military members shall have a waiver of dues during the time of service, provided that they are in good standing at the time they entered the armed forces. Military members shall enjoy full membership privileges and certificates of membership shall be issued to them for each year.

Section 7. (B) Young physicians going from internship or residency to military service shall be granted military membership with dues exemption, provided the request for such membership is transmitted through a component society. Such military membership shall be on an annual basis only. The requirement for active membership prior to exemption shall be waived for such military members. Such members shall enjoy full membership privileges except that they may not vote or hold office, and certificates of membership shall be issued to them. This section shall not be construed to mean that military membership may be granted to those physicians who enter military service after a period of active practice during which time they were not members of the Society.

RESOLUTIONS

The following resolution has been submitted for consideration of the House of Delegates:

Resolution on Emergency Health Technician From Traffic Safety Committee

WHEREAS, health care to the emergency patient is usually first administered by ambulance attendants, emergency room personnel or perhaps those of lesser training, and

WHEREAS, the ultimate recovery and the possible permanent disability are perhaps related to this initial medical care, and

WHEREAS, care to the emergency patient and the injured is acknowledged to be the area most in need of improvement, and

WHEREAS, there is no uniform standard of training or performance required of those persons involved in the initial evaluation and transportation of the injured, and

WHEREAS, it is the responsibility of the Medical Profession to require high quality care to all needing medical care, including the acutely injured,

THEREFORE, the Traffic Safety Committee of the Arkansas Medical Society and the Trauma Committee of the Arkansas College of Surgeons requests the Arkansas Medical Society to consider and act on the following resolution at the April 1971 House of Delegates meeting to present a tangible and worthwhile solution to this dilemma to the State Administration and Gentral Assembly.

RESOLVED that a new health care designation, Emergency Health Technician, be discussed and developed in Arkansas under the guidance and responsibility of the Arkansas Medical Society, and

RESOLVED that a curriculum be established for training Emergency Health Technicians as ambulance attendants, emergency room attendants, and for industrial emergency care, and

RESOLVED that the Arkansas Medical Society formulate standards of achievement to qualify persons for the above designation of Emergency Health Technician, and

RESOLVED that once certified the Arkansas Medical Society will promote these persons to serve the public in the above emergency health situations, and

RESOLVED that the Arkansas Medical Society be active in developing and promoting these training programs in various regions of the State of Arkansas.

House of Delegates Business Affairs

Continued on next page.

Resolution on: Physician Assistants
From: Washington County Medical Society

At the meeting of the House of Delegates held in connection with the Winter Meeting of the Arkansas Medical Society on November 22nd, consideration was given to a resolution on Physician Assistants as submitted by the Washington County Medical Society. After lengthy discussion, the House voted to place the resolution on the agenda for meetings of the House to be held in connection with the Society's annual meeting April 25-28, 1971. The resolution will be referred to a reference committee of the House. The open hearing of the reference committee will allow members to present views on the resolution.

The resolution received from the Washington County Medical Society in October 1970 is as follows:

WHEREAS, most knowledgeable medical professionals are agreed that it is becoming increasingly difficult to provide quality health care to all people, and

WHEREAS, many physicians, including our State Society President, Dr. Jack W. Kennedy, and AMA President, Dr. Walter C. Bornemeier, have urged greater use of medical assistants to help physicians provide quality care, and

WHEREAS, many active programs are either already in progress (Duke University, Alderson-Broaddus College-University of West Virginia, University of Colorado, University of Washington, and others) or are being created by legislation (California) to train physician's assistants, and

WHEREAS, even with recent and projected increases in medical school enrollment, it is not expected that physician numbers will be adequate to meet increased needs and demands, and

WHEREAS, it would be highly undesirable, concerning present standards of medical practice, to create a briefly-trained independent practitioner, who might be equated with present M.D. physicians, merely to create more health manpower, as appears to be the concept of certain lay advocates of National Health Insurance, and

WHEREAS, it is important that the standards of training for potential Physician's Assistant be kept high and that the utilization, supervision, and licensure of these Physician's Assistants be kept directly under licensed M.D. physicians and within the present traditional physician-patient-private medicine system, and

WHEREAS, plans for some form of additional independent practitioners — other than traditional physicians — are already being considered at the national government level,

THEREFORE, the Washington County Medical Society requests that the Arkansas Medical Society consider and act on the following resolution at the November 1970 House of Delegates Meeting, so as to have a tangible practical proposal, from knowledgeable leaders in Arkansas medicine, ready to present to the State Administration and General Assembly early in 1971:

RESOLVED that a new professional entity — Registered Physician's Assistant — be considered, discussed, and developed in Arkansas, and further

RESOLVED that the areas of responsibilities, duties, and limitations of such an entity be clearly defined by M.D. physicians, and further

RESOLVED that mechanisms for testing, licensure, registration, certification, and regulating utilization of these Assistants be established and be supervised by M.D. physicians, and further

RESOLVED that consideration be given toward development of a Physician's Assistant curriculum in Arkansas Colleges and Universities, preferably with minimum requirements equivalent to a five-year Bachelor's Degree, such as Bachelor of Science in Healing Arts, and further

RESOLVED that the Arkansas Medical Society be active in developing dialogue between all Arkansas physicians concerning the Physician's Assistant concept and be active in developing appropriate legislation to accomplish proper development of this program in Arkansas.

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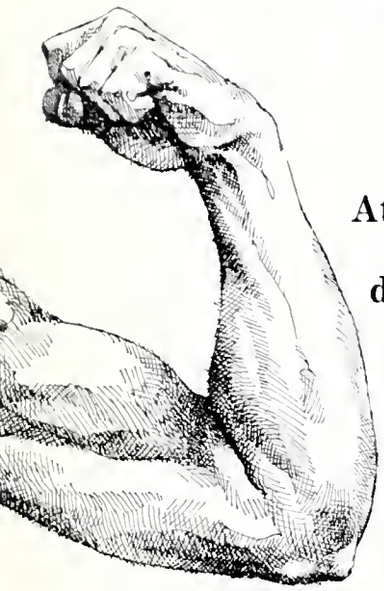
THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 67 No. 11

FORT SMITH, ARKANSAS

ANNUAL SESSION
APRIL 25-28
ARLINGTON HOTEL, HOT SPRINGS

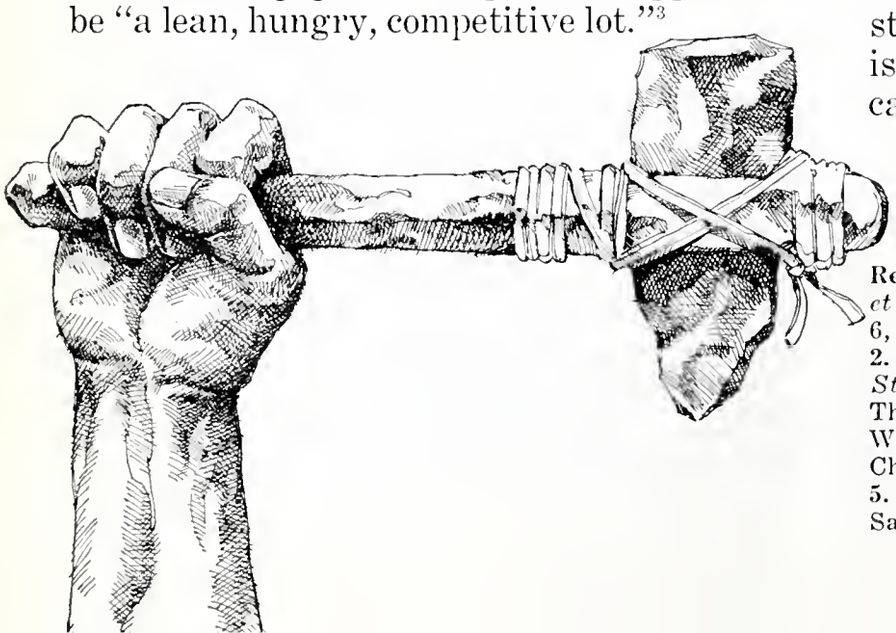
IF MORE MEN CRIED



At least seventy-five out of one hundred adults with duodenal ulcers are men.[1] Why? It may be significant that duodenal ulcer patients tend to crave recognition and are "especially vulnerable to threats to their manly assertive independence."[2]

Hypersecretion—an atavistic response. Stewart Wolf, who, with Harold G. Wolff, studied the personalities of duodenal ulcer patients, wonders if masculine competitiveness is related to "an atavistic urge to devour an adversary." It is striking, he reports, that an accentuation of gastric acid secretion and motility can be "induced in ulcer patients by discussions that arouse feelings of inadequacy, frustration and resentment."[2]

By chance? A lean, hungry lot. Was the link between emotions and gastric hyperacidity acquired through mutation to serve a purpose? During man's jungle period of evolution, the investigator points out, a male dealt with a foe by killing and devouring it. "It may be more than coincidence," he concludes, that peptic ulcer patients appear to be "a lean, hungry, competitive lot."[3]



Big boys don't cry. If more men cried maybe fewer would wind up with duodena ulcers. But men will be men—the sum total o their genes and what the are taught. Schottstaed observes that when a mother admonishes he son who has hurt himsel that big boys don't cry, sh is teaching hin stoicism.[4] Crying is th negation of everythin society thinks of as manly A boy starts defending hi manhood at an early age

Take away stress you can take away symptoms

There is no question that stress plays a role in the etiology of duodenal ulcer Alvarez[5] observes that many a man with a ulcer loses his symptoms the day he shuts u the office and starts out on a vacation. Th problem is, the type of man likely to have a ulcer is the type least likely to take lon vacations or take it easy at work.

The rest cure vs. the two-way action o Librax.® For most patients, the rest cure i as unrealistic as it is desirable. Still, th stress factor must be dealt with. And her is where the dual action of adjunctive Libra can help. Librax is the only drug that com

References: 1. Silen, W.: "Peptic Ulcer," in Wintrobe, M. M *et al.* (eds.): *Harrison's Principles of Internal Medicine*, e 6, New York, McGraw-Hill Book Company, 1970, p. 144 2. Wolf, S., and Goodell, H. (eds.): *Harold G. Wolff Stress and Disease*, ed. 2, Springfield, Ill., Charles Thomas, 1968, pp. 68-69. 3. *Ibid.*, p. 257. 4. Schottstaed W. W.: *Psychophysiologic Approach in Medical Practic* Chicago, Ill., The Year Book Publishers, Inc., 1960, p. 16 5. Alvarez, W. C.: *The Neuroses*, Philadelphia, Pa., W. B Saunders Company, 1951, p. 384.

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The Nurse Practitioner: University Medical Center

Barbara Pearson, M.N.*

As mentioned earlier, the University School of Nursing is now preparing graduates for two different approaches to nursing: first, that of the supporting nursing services, the only approach generally available today; and second, that of the primary, patient-focused services, the approach which offers primary, individual and personalized attention to the patient and his needs.

The nursing faculty believe, that although both approaches were available to patients and to the physician thirty years ago, burdensome, yet justified, administrative duties and responsibilities have increasingly pulled today's nurse, despite her desire to provide personalized patient-oriented care. We believe, further, that effective and comprehensive nursing services must employ *both* approaches, and that each must possess well-prepared, professional leadership.

To render such services and, more specifically, to restore an appropriate emphasis to primary, patient-focused nursing care, the School of Nursing and the Nursing Service Department initiated, in June of 1967, efforts to obtain funds that would assist in developing a staff of clinical nurses who would work with patients as role models for baccalaureate nursing students and who would function so that pirmary attention could be given to individual patients. Part of this process included the development of an advisory committee to represent every area, department, and school of the Medical Center. Physicians and nurses are the major constituents of the committee.

Project applications require lengthy review prior to funding, and in June, 1968, our application was still in this process of review. It was then, through a cooperative venture between Nursing Service and the School of Nursing, that an experimental pilot project to utilize this approach was begun. Two pediatric clinical nurse practitioners were appointed in September, 1968. Since that time, a total of eight nurses have functioned in the nurse practitioner role in our setting. At the present time, there are six clinical nurse practitioners at the Medical Center; two each in the area of pediatric, maternity and surgical nursing.

The CNP is appointed to a clinical medical service on which she works with a caseload of patients. The basic criterion for selection of caseload patients is multiplicity of nursing needs; consequently, her patients will be among the most complex patients on the service. In addition to her own contact with patients on the service, the CNP learns of patients who could especially benefit from her care from many sources: physicians, nursing personnel, social workers, and other health team members. The number of patients carried on a caseload by the practitioner at any given time will vary, depending on the complexity of the needs of the patients with whom she is working. In the period from July 1, through November 30, the practitioners on the clinical nurse practitioner staff have carried a total of about 230 patients on their caseloads. This represents the initial efforts of the Project staff.

The CNP assumes 24-hour responsibility for promoting optimal nursing care of every patient on her caseload, placing an emphasis on around-the-clock continuity of nursing care during hospitalization, and continuity of health care in the transition from the hospital to the home. The CNP's freedom from shifts, and from assignment to one clinical division, allow her to work with patients and families, physicians, nursing staff, and other health team members when and where she can foster this continuity most effectively. The initial contact and selection of patients for the surgical and pediatric practitioners usually occurs shortly after the patient has been admitted

*Assistant Professor of Nursing; Director, Nurse Practitioner Project University of Arkansas School of Nursing, Little Rock, Arkansas.

to the hospital. For the maternity practitioners, however, selection generally occurs during the antepartal visits of the patients to our clinics. The majority of the maternity patients selected for their careloads are patients whose obstetrical course is complicated by other health problems. Likewise, the extent of the work with the patient in the hospital is usually shorter for the maternity practitioner than for the pediatric and surgical nursing practitioners because:

As the CNP adds a patient to her caseload, she begins her work by consulting with the physician about his plan of care, and by interviewing the patient and/or his famliy. The CNP compiles information about the patient in a nursing history which becomes a permanent part of his record. Using the defined medical plan of therapy as a basis, she desgins a plan of nursing care which incorporated, in addition, the data which she has obtained from the patient, and the results of preliminary discussions with the nursing staff. As long as a patient remains on her caseload, she continues to work closely with the physician to maintain the currency of the nursing plan and to assist in coordinating health resources for the patient and family.

Planning good nursing care is essential, but the crux of the problem of improved care comes in the proper implementation of a good plan. It is in her efforts to insure this implementation that the CNP makes one of her most significant contributions to better patient care. She, unlike the nurse working within the system of supporting services, because she is burdened with neither the time limitations imposed by tours of duty nor the administrative demands of maintaining the unit, can utilize her time and energies at the side of the patient when they will enhance the care of the patient most. Often, the CNP will provide the patient's care personally, because of its complexity; this also allows her to identify problems in the patient's care, and to devise better approaches and techniques for individualizing the care. At other times, she will work on a one-to-one basis at the bedside with nursing personnel who are assigned to care for the patient, by teaching and/or supervising them as they give the care.

When it will benefit the patient and/or influence nursnig care, the CNP accompanies the patient when he leaves the division for prescribed activities and/or procedures. When the patient returns to the division, she defines ways in which the nursing staff may effectively follow up on the activities and/or provide special care following procedures. This aspect of her functioning is especially meaningful to the patient who is undergoing surgery. The practitioner, who has usually participated in the pre-operative preparation of the patient, often accompanies the patient to the operating room, maintains contact with the family to allay their anxieties during the operative period, works with the recovery room staff caring for the patient in the immediate post-operative period and works closely with the nursing staff to care once the patient is returned to the clinical division.

In a similar way, the CNP can enhance the effectiveness of activities such as physical therapy, by being with the patient during treatments, discussing those elements of the therapy that should be carried out on the division, and communicating and/or demonstrating this to the nursing personnel.

Another way in which the CNP functions to insure the implementation of planned care is by being accessible, on a 24-hour basis, to physicians and nursing staff, for consultation concerning the care of patients on her caseload. When she has consistently discussed, with the physician, his medical plans and expectations concerning the patient's care and progress, she can be especially helpful in assisting nursing personnel as they make judgments about patient problems they are encountering. Whenever discussion of a patient's care by all nursing staff members will significantly improve such care, she initiates group conferences on each tour of duty.

The practitioner assumes responsibility for implementing some aspects of the planned care of the patient. Chief among these are those aspects of patient-family teaching which have been agreed upon by the physician and the nurse as being a nursing responsibility. Although other nurses value highly the need for this kind of teaching, the shortage of nurses, and the innumerable demands made upon them, do not allow them to devote sufficient time to patient teaching. Since the CNP's patients often possess health problems which are long-term in nature,

the required patient-family teaching is usually extensive.

Although the CNP actually does most of the initial agreed upon patient-family teaching, she attempts to familiarize nursing personnel with the content of the teaching, and the areas in which patient or family may require further explanation, and when necessary, preparing teaching materials and guidelines to assist the nursing staff; in this way, all nurses in attendance will consistently work toward the established goals.

These are some of the ways in which the CNP functions to increase the effectiveness of nursing services to the patient in the hospital setting. In our setting, she has also benefited both the physician and the nurses in the supporting services by being the individual who assumes responsibility for the families of patients during times of great stress when they are in need of intense emotional support. Often she will be a primary figure in assisting patient and family to accept a diagnosis and to reach the point of being able to cope with the requirements for care which are necessary. Likewise, in crisis situations in the patient's progress, or in instances where the patient and/or family have difficulty accepting the prognosis of the patient, the CNP can devote the time to families to assist them. Although the period of medical and nursing care in the hospital is a crucial time for the patient, his transition from the hospital to the home and community will often be of equal importance if he is to maintain and promote the health status which was achieved by this care. Great demands are often placed on the physician in his role as head of the health team, as he attempts to initiate and/or coordinate health team efforts to aid the patient in this transition. From the time of their initial discussion of the medical and nursing plan of care, the practitioner can offer much assistance to the physician in securing health services and resources for the patient.

Throughout the time the CNP works with the patient and family during hospitalization, she is planning for the patient's discharge. This is especially true in cases in which members of the family will perform extensive nursing care of the patient in the home and institutions in which the patient and family will need the assistance of health agencies in the community. The CNP makes an intense effort to evaluate the home situation and the capability of the family to cope with the health problems when they return to that environment.

The CNP confers with the physician about identified problems and needs, assists in the coordination of the efforts of other health team members providing service to the patient and, in conjunction with the physician, makes referrals to appropriate health agencies. Once definitive plans for discharge have been established with the physician, the CNP devotes much of her time to teaching the patient and family about the care of the patient in the home.

Insofar as possible, the CNP attempts to follow the patient on an out-patient basis for as long as he requires medical and/or nursing supervision. When the medical supervision of the patient requires that he visit the clinic or physician's office, the practitioner sees the patient at that time, to evaluate his adjustment at home, and to identify additional ways in which nursing might enhance his care.

Once the patient is referred to a health resource or agency in his community, especially if the patient is not returning to the Medical Center for periodic visits with the physician, the CNP assumes a liaison role between the Medical Center and the agency, a role in which she communicates with the agency as frequently as is necessary to insure continuity of care. Whenever possible, she relays information concerning the patient's progress to the physician.

After the patient's discharge, the practitioner also becomes a liaison between the hopital and home for the patient and family. Many caseload patients contact the practitioner by phone or letter when problems with which they are unable to cope arise in the home setting. These problems can usually be resolved in telephone conversation or by enlisting the aid of a health agency. When the problems are of a medical nature, they are, of course, referred to the physician.

The functioning of the CNP delineated herein is based on our efforts, at the University Medical Center, to utilize an approach to nursing in which the primary focus is the patient. The approach offers, however, innumerable possibilities for enhancing the health care of patients, and for increasing the contributions of baccalaureate nurses in a variety of health settings.

Developing the Clinical Nurse Practitioner

Elois R. Field, Ph.D.* and Barbara Pearson, M.N.**

Physicians have been an essential influence in the philosophy of the School of Nursing at the University of Arkansas, and we have wanted to discuss this with you many times during these last six years. The faculty of the School of Nursing is dedicated to preparing a nurse who can work with physicians in loyal, thoughtful and effective ways, a nurse who can make professional decisions about nursing care and services whether another nurse is present or not; a nurse who can implement nursing care herself or who can draw other appropriate nursing personnel into effective care services; and a nurse who can share responsibilities for coordinating efforts of the many different professions and disciplines in the health team. We have wanted to be certain that the Baccalaureate graduate of our School would demonstrate abilities to bring about genuine improvement in the nursing care of patients. There is now enough evidence of achieving this goal to tell you about our progress.

We are confident of your interest in the mutual goals we share for adequate health services. We wonder too if you share with us a common evaluation of today's health care system — it isn't improving as we would like and there are days when we are sure we see evidence of decline on every hand.

In 1940 patients appeared to receive better nursing services than they do today. Until early 1941, patient census was high, but nursing care could be planned. There was time to get to know both patients and families and to discuss patient care with medical staff members.

In late 1941, patient census began to rise rapidly and the halls became filled with beds and their patients. What had been no longer was, and as it happened, never was to be again. Almost overnight, the cry was for additional personnel just to keep services together. It was at this time that those much needed people, the practical nurses, entered the nursing team and joined registered nurses in an effort to provide quality nursing.

Both medicine and nursing have been distressed to see efforts for the patient often thwarted by too few personnel and too many patients needing care crowded into a given span of time.

Personal experiences in staff nursing, private duty nursing and supervision have been filled with the frustrations of accomplishing too little for the patient's welfare and spending too much energy in directions that did not need preparation in nursing. Some demands were place-oriented problems such as getting equipment from one place to another, making out personnel schedules, checking and delivering diet trays, constant surveillance of records, filling in for any worker who might not be available. Other demands were shift-oriented and place-oriented problems such as occurred in a 150-bed private hospital where one of us was in charge of the recovery room. After patients were taken to their own room, there was no channel through which to intervene or even to influence the nursing care of these people. Fragmentation of effort which is frustrating to the nurse is a distinct hazard to the patient.

In an effort to find practical solutions to these problems, we searched back into the development of nursing. We have looked at the nursing care system of 1940 and early 1941, for example, and have made three major observations. One observation was that doctors and nurses appeared to discuss plans for patients more frequently together than now and the physician could expect the nurse to coordinate care for him.

A second observation was that nursing in an institution must have at least two approaches. One of these approaches is the personalized nursing care to patients and the other dimension

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**See footnote at page 393.

is that of the place-oriented, shift-oriented supportive nursing services. Both approaches must have challenging leadership from the professional nurse if patients are to receive optimum care. In both approaches also, it is essential that every member of the nursing team — the registered nurse, the licensed practical nurse and the nursing assistant — each must have dignity and status.

A third observation was that registered nurses in 1940 and 1941 could manage both the personal care to individual patients as well as the institutional supportive services. Expected results were achieved. Why could such results be achieved then and not now?

One great change is that the number of people seeking health services in doctors' offices and clinics has multiplied at least six times while the number of people receiving services within hospitals and other institutions has multiplied at least four or five times. Health insurance and an improved economy have been factors here.

Other changes include advances in medical research knowledge and technology, increasingly better prepared physicians, more complex regimens of treatment prescribed by doctors, advances in drug therapy, an increase of health professionals and other health workers, an increase of institutions providing services, and a continuing population explosion. All of these changes have catapulted demands for health services. Nursing, as one health profession, has found itself in a dilemma of wanting continued high quality nursing care but of not being able to provide that care.

Still other changes are related to supply of manpower. As reported in the 1939 issue of *Facts About Nursing*, there were 294,189 registered nurses in three major fields; private duty nursing, 55 percent; institutional nursing, 36 percent; and public health nursing, 9 percent. There was an estimate of one registered nurse for 416 persons in the population. In 1938 those states listing licensed practical nurses gave a total of 792.

Facts About Nursing, 1969, reported 680,000 registered nurses in five major fields: institutional nursing, 69 percent; office nurse and private duty, 17 percent; public health, including school nursing, 7 percent; nursing education, 4 percent; and occupational health, 3 percent. Approximate figures for the United States show one registered nurse for every 300 people. Arkansas figures in the same reference show one registered nurse for every 850 persons.

In the same 1969 reference, employed licensed practical nurses were listed as 343,635. Almost 66 percent were in hospital nursing, 14 percent in private duty, 6 percent in offices, 12 percent in nursing homes and 2 percent in industry and public health. An approximate ratio throughout the United States is that there is one practical nurse for 580 persons. In Arkansas the approximate ratio is one practical nurse for 550 persons in the State.

A brief summary of these figures shows that registered nurse numbers have more than doubled and the number of licensed practical nurses has increased 400 times the figures of 1939. Also, registered nurses were present in the population in 1939 in a ratio of one to 416 people. In 1969 the ratio was one registered nurse for 300 people in the resident population. Figures for practical nurses are in addition to this evidence of progress in relation to population trends.

If numbers of nurses alone could assist with the problems of quality care, then why does the bleak daily picture of nursing services exist as it exists today? Surely we would be noticing gradual improvements in the nursing care that all of us believe is best for patients. Instead, we often are not experiencing these gradual improvements.

This brings us to the major emphasis of this paper. Earlier, we mentioned two approaches that must be present if nursing services are to be effective. On the one hand, there must be an approach to care of patients through a system of high quality supportive nursing services in the agency. By this "system" we mean the system that now is utilized by every hospital and agency. These supportive nursing services are essential for the patient. Although studies show that nursing personnel functioning within these services spend only about 35 percent of their time in patient-related tasks, yet within these essential services nursing care can be delivered to the patient. The philosophy of these services is altruistic and well established.

On the other hand, there is equal need for a kind of nursing approach that is concerned di-

rectly with patients' needs. This second approach delivers, or sees that there is delivery of, personalized nursing to each patient. This focus must be re-established, it must regain professional nurse leadership. Each of these approaches is essential and is complementary to the other, yet at this moment almost all energy of nursing is being spent in the supportive nursing services. If there could be professional nursing leadership with nursing teams functioning from the direction of each approach, efforts then could be coordinated for the best welfare of the patient.

Graduates of our Associate Degree in Nursing program are being prepared primarily for the supportive system of nursing services within which licensed practical nurses also are valued members of nursing teams. Every prepared person is needed for nursing in Arkansas.

In our Baccalaureate Program in the School of Nursing at the University of Arkansas, graduates are prepared to enter either approach in nursing care and to provide leadership in either approach.

I am proposing that hospitals and agencies over the State introduce into their settings the second leadership approach to nursing care — that of a clinical staff of nurses who have Baccalaureate in Nursing preparation. These clinical nurse practitioners would carry caseloads of patients. They would demonstrate two important characteristics: 1) They would make professional decisions about nursing care and implement any or all decisions. 2) They would function as nurse partners with physicians.

It is this last characteristic that makes it so important to encourage this plan among physicians first. Physicians have ultimate responsibility for patient care. The clinical nurse practitioner, functioning as a nurse, must have this medical environment to develop a complemental nursing care plan. She can be available on a 24-hour basis, and therefore make it possible for the medical staff to be more selective about use of professional services. Furthermore, because she is free of the shift and place assignments, she can be associated more closely with medical plans and with needs of patients for coordinating 24-hour nursing care.

How to introduce the nurse practitioner into a specific institution can be accomplished best through cooperative planning on the part of physicians, the hospital administrator, and the director of nursing service. One way of introducing this plan in an institution might be to appoint the major clinical nurse practitioner as an Associate Director of Nursing but responsible to the Chief, Medical Staff for functioning. Another administrative plan could be as a mobile nurse practitioner employed by a group of physicians.

We have found that our Baccalaureate graduates can move very early into the clinical nurse practitioner role, and our practitioner project is demonstrating the success and satisfaction of this role. Improvement in care of individual patients is being demonstrated.

I have not believed it to be fair to the physicians in Arkansas to suggest placing nurse practitioners in other settings until we knew from our own experience whether our ideas could be implemented. We believe this approach will be even more effective with private patients and with private practice physicians than with patients who usually come to the University Medical Center. Our thought has been that if this plan is effective in the Medical Center, then it has a greater chance of being effective in communities with private medical practice. Our suggestion is that at first there be at least two practitioners functioning in the same geographic area, possibly in the same institution, or, one in a hospital and another one employed by a nearby group of physicians. It is essential that there be more than one for purposes of close communication about functioning. Also, practitioners should be in close communication with other practitioners within the State as at the University so that common functions and problems can be identified in continuous ways.

The second part of this article will concern itself with our clinical nurse practitioners at the University Medical Center. However, we would like to hear from you in relation to promoting this clinical nurse in your offices, in the hospitals, and other agencies in Arkansas. We look forward with much interest to opportunities of working with you in this way.

UNIVERSITY OF ARKANSAS
SCHOOL OF NURSING

Elois R. Field

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Appointed: August 17, 1964

(Spec. Field: Educ. Psych.)

Academic Background:

University of Chicago, Chicago
PhD Education 1961

University of Washington, Seattle
MN Nursing 1954

Wheaton College, Wheaton, Ill.
BA Zoology 1945

Baylor Hospital School of Nursing, Dallas, Texas
Diploma Nursing 1943

Awards or honors:

1969 Who's Who in American College and University Administration

1967 Nurse of the Year, ASNA

1966 As Alumnus of Wheaton College, elected into Scholastic Honor Society, recognized at graduation exercises

1964 Invitation from students at Emory University, Charter member from faculty, Sigma Theta Tau

1958 Pi Lambda Theta membership

1959 Included in Who's Who of American Women

1957 Two years Fellowship Funds from the National League for Nursing

Publications:

February, 1954
American Journal of Nursing, Article on use of the flannelboard in teaching History of Nursing

August, 1954
Book Review, Jamieson & Sewall's 4th Edition, History of Nursing

Professional and other Organizations:

American Nurses' Association, served as State EACT Chairman in Texas, 1955-57. Close cooperation with the Arkansas State Nurses' Association in relation to recruitment, planning for nursing in Arkansas.

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AAUW, member and area chairman, Educ.

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PhD Dissertation:

Original Research in Nursing Performance

Granulomatous Colitis and Ileocolitis

John M. Dennis, M.D.*

When regional enteritis was first described by Crohn, Ginzberg and Oppenheimer[1] in 1932, it was believed to be an inflammatory lesion confined to the terminal ileum. Subsequently, it became apparent that this same nonspecific granulomatous disease can involve any portion of the gastro-intestinal tract from the stomach to the anus.[2] Commonly, it involves both the small bowel and colon.

Recognition that the colon may be involved by this granulomatous process was slow in coming, probably because interest in inflammatory lesions of the colon was focused mainly on chronic ulcerative colitis. Although secondary involvement of the cecum in a patient with primary Crohn's disease of the ileum was first described by Colp[3] in 1934, and extension of regional ileitis to the colon in 55 per cent of 100 cases of regional ileitis was reported by Rappaport et al[4] in 1951, it is only in the past decade that granulomatous colitis has been widely recognized and distinguished from ulcerative colitis.

The incidence of granulomatous colitis and ileocolitis has increased greatly during the past decade, while that of ulcerative colitis has declined. While there is undoubtedly a true increase in the incidence of this disease, a part of this apparent increase may be due to the substantial progress that has been made in distinguishing granulomatous from ulcerative colitis. The classical clinical and pathological features of granulomatous colitis and ileocolitis and ulcerative colitis are sufficiently demarcated to differenitate between these two entities. There are, however, still a few cases of colitis which cannot be catagorized as either granulomatous or ulcerative colitis.

While granulomatous disease of the bowel more commonly involves the small bowel, the colon may be involved in several ways.

1. The colon may be the primary site of the granulomatous disease in about 20 per cent of the cases.[5,6,7]

2. In addition to granulomatous disease of the small bowel, there may be concurrent involvement of the colon. The disease process in the colon may be continuous with similar disease in the terminal ileum or involve a segment remote from the diseases ileum. It apparently begins in the two areas at approximately the same time, as both the small bowel and colon are involved when the disease is first discovered.

3. The colon may be involved only after a partial bowel resection performed for region ileitis. The colon involvement is immediately adjacent to the anastomosis though the process may extend to other parts of the colon.

4. The colon may be involved by direct extension from an adjacent loop of diseased small bowel with fistulae formation.

Janowitz et al believe that regional ileitis and ulcerative colitis are associated only rarely and by chance. Marshak and Lindner[2] state that although regional enteritis and ulcerative colitis tend to occur in the same populations and even in different members of the same family, that they have never observed regional enteritis of the small bowel and ulcerative colitis in the same patient. When there is inflammatory disease of both the small bowel and colon, it is reasonable to assume that the disease process involving these two segments of bowel has the same etiology and the involvement can be assumed, with a high degree of certainty, to be granulomatous. It seems unlikely, particularly in the ileocecal involvement, that two different diseases would occur in continuity with each other. It is those cases with only involvement of the colon, with which one must be concerned as to whether the disease is granulomatous or nonspecific ulcerative colitis.

Pathologic Considerations

Grossly, the bowel wall is greatly thickened and rigid in the involved areas. Frequently, however, areas of normal bowel are often interspersed between the involved areas. The lumen is markedly narrowed and often strictured. The mucosa is red, edematous and polypoid in ap-

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pearance with longitudinal and tranverse ulcerations. Fistulae may be present, often extending to adjacent viscera. The mesentery is thickened and the regional lymph nodes are often enlarged.

Microscopically, a non-casseating granulomatous inflammatory reaction, with multinucleated giant cells, epitheloid cells and mononuclear cells, involves all layers of the bowel. Giant cell granulomas, although characteristic of this disease, are not essential for the diagnosis if the other pathological findings are typical.

Clinical Considerations

The clinical features of granulomatous ileocolitis resemble those of the other inflammatory lesions of the bowel, i.e., abdommial cramps, diarrhea, fever, malaise, anorexia and weight loss. The disease occurs most frequently in the young adult, usually in the late teens or early twenties. It runs a more chronic and unremitting course than ulcerative colitis. Acute episodes are rare and toxic dilatation of the colon is seldom observed. Perirectal and perianal fistulae are common with Lockhart-Mummery and Morson[6] reporting an incidence of perirectal and perianal ulcerations and fistulae in 80 per cent of their cases of granulomatous disease of the large bowel. This is in contrast to only 23 per cent of the patients with ulcerative colitis. Abdominal pain is frequent in contrast to ulcerative colitis. Thickened loops of bowel are palpable as abdominal masses.

While diarrhea is present in a large percentage of cases, an important clinical observation is the infrequency of gross rectal bleeding, even in those cases where diarrhea is severe and prolonged. The stools, however, are often positive for occult blood with chronic blood loss probably the cause of the anemia which is observed frequently in this disease. Since granulomatous disease involves the rectum in no more than 20 per cent of the cases, proctosigmoidoscopy is of little value in the diagnosis of this disease.[2]

Radiologic Considerations

Granulomatous disease involves most commonly the ileum and proximal half of the colon. When concomitant inflammatory disease of both the small bowel and colon is demonstrated radiologically, the process is almost invariably a granulomatous one. A small bowel study is important, therefore, in the radiologic evaluation of an inflammatory lesion of the colon.

Granulomatous disease of the colon and small intestine produces similar radiologic findings in the involved segments of bowel. Although the entire colon may be frequently involved, there is seldom complete involvement of the mucosa. This disease does not always involve the entire circumference of the bowel and small patches of normal mucosa may be observed radiologically in the involved areas. This is characteristic of granulomatous disease. One or more areas of the bowel may be involved with intervening segments free of disease, the so-called "skip areas." These intervening areas may be dilated from stasis, due to a narrowing or stricture of the lumen, producing a partial closed loop type of obstruction. The involved mucosa is markedly edematous with long longitudinal and transverse linear ulcerations producing a cobblestone appearance. The transverse ulcers penetrate into the bowel wall and present as numerous long spicules perpendicular to the long axis of the bowel. These may ultimately lead to small intramural abscesses and internal and external fistulae.

While the areas of involvement of the colon and the presence of small bowel involvement are important factors in differentiating between granulomatous and ulcerative colitis, the radiographic findings in these disease are in marked contrast. In the early stages of granulomatous colitis, the bowel does not show irritability, spasm or obliteration of the haustral pattern as observed in ulcerative colitis. In granulomatous disease, the colon is of varying diameter with eccentric and skip areas of involvement which are not present in chronic ulcerative colitis, where the bowel is uniformly contracted with complete loss of haustrations. Even though the entire colon may be involved in granulomatous disease, the mucosa is seldom as completely involved as that in ulcerative colitis. The bowel mucosa in granulomatous disease is polypoid or cobblestone in appearance with longitudinal and transverse ulcerations, the latter producing spiculations of the bowel wall, in contrast to ulcerative colitis where the mucosa is usually granular in appearance with shallow ulcerations. Internal fistulae occur much less frequently in ulcerative

colitis. The increased incidence of carcinoma and the occasional development of toxic dilatation associated with chronic ulcerative colitis has been observed in granulomatous lesions of the bowel.

While the differential diagnosis involves mainly ulcerative colitis, one must also consider tuberculosis, diverticulitis, vascular lesions and occasionally carcinoma.

Prognosis

Granulomatous disease of the bowel tends to be more severe when both the ileum and colon are involved. The greater the degree of involvement of the ileum, the more severe the illness and the worse the prognosis. When the disease is confined to the colon, the prognosis is better. Patients frequently do well following segmental resection of the colon, provided the small bowel is not involved.[2] Recurrences are less frequent in the colon than in the small bowel. In those cases with an inflammatory lesion confined to the colon, because of the therapeutic implications and prognosis, one must be concerned whether or not the disease is granulomatous or non-specific ulcerative colitis. Usually the two disease can be differentiated on the basis of available clinical and radiological evidence.

Summary

Granulomatous colitis may exist as a primary lesion confined to the colon but more frequently occurs concomitantly with a granulomatous lesion of the small intestine — granulomatous ileocolitis. In those cases with concurrent involvement of the colon and small intestine it is reasonable to assume that the disease process involving these two segments of bowel have the same etiology. It is those cases with only involvement of the colon with which one must be concerned as to whether the disease is granulomatous or non-specific ulcerative colitis. While the differentiation between granulomatous and non-specific ulcerative colitis must be based on pathological findings, there are certain clinical and radiologic features which are highly suggestive of granulomatous disease.

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Effect of Iron Therapy in Paroxysmal Nocturnal Hemoglobinuria

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Blood 36:559-565 (Nov) 1970

Two patients with paroxysmal nocturnal hemoglobinuria who were iron-deficient were treated with parenteral iron compounds. A marked increase in hemoglobinuria followed, beginning four days after the first administration of the iron compound. The rise in hemolysis paralleled the rise in reticulocyte count. When erythropoiesis was suppressed with transfusion, the administration of iron did not bring about an increase in hemolysis. This indicates that the effect of iron in bringing about hemolysis in patients with paroxysmal nocturnal hemoglobinuria is due to an increase in erythropoiesis with the production of excessive numbers of complement-sensitive cells.

The Role of the Medical Department of Hot Springs Rehabilitation Center

George H. Hassard, M.D.*

Introduction

This year, 1970, marks the 50th anniversary of the enactment of the Federal law creating vocational rehabilitation service in this country. Arkansas physicians are afforded the opportunity to assess the advancements in this increasingly important facet of the overall medical armamentarium. It allows them to reconsider present objectives and to propose renovations in Rehabilitation's protocol.

During my five months tenure as Medical Director of Hot Springs Rehabilitation Center, it has become apparent that some medical practitioners of this state have a rather nebulous understanding of Arkansas Rehabilitation Service (ARS). This is particularly prominent in reference to Hot Springs Rehabilitation Center (HSRC). The function, purpose, pholosophy, organizational table, physical assets, personnel, and limitations of the HSRC Medical Department seem alien.

Statistically, the physician is faced with an ever increasing case load of the non-curable chronically ill as well as the chronically disabled. All too often, his medical school orientation and training emphasized the acute to the neglect of the chronic. Thus, he casts about in search of the best medical dispensation for these cases. The term *rehabilitation* ignites a spark of hope.

It behooves the practitioner, then, to acquire a working acquaintance with the services rendered by Hot Springs Rehabilitation Center in order to attain the highest fruition of medical endeavor for his patient.

For clarity, in any presentation word pictures are much less impressive than a tour or a photograph. I offer a few word pictures, particularly along the lines of a philosophy of a medical department in rehabilitation, and extend the invitation for any physician to visit the Hot Springs Rehabilitation Center Medical Department, not only at the scheduled Tuesday guided tours, as advertised in the Chamber of Commerce publication "Today in Hot Springs," but at any time that is congruent with his own convenience.

Manual of Operations

We must plan ahead for tomorrow's changes in medical application in order to keep abreast today, but these plan changes must be based on a solid and proven skeletal framework of policies and procedures which have succeeded in the past. Thus, the Department primarily proceeds on instructions in "Hot Springs Rehabilitation Center Policy and Operational Manual." However, we try to synchronize our procedures not only with the "Center Policy Manual" but also with Arkansas Rehabilitation Service Operational Procedures (ARSOP) rules and regulations for hospital and related institutions as prescribed by the Arkansas State Department of Health, Division of Hospitals and Nursing Homes, and also the tenets prescribed by the American Medical Association and American Hospital Association Joint Commission on Accreditation of Hospitals (JCAH). This sounds like an awesome venture, and it is.

More important, however, is the task of protecting the health of our clients to their satisfaction, to the satisfaction of their Counselors, their instructors, their administrators, their relatives, yes, and their politicians, and yet never compromise our own ideals of sound medical practice. This again proves to be a more awesome task than is indicated superficially. At times, there may even be an apparent conflict. This is prevalent in any art as compared to a pure science. Thus, our decisions are based on the listed manuals as stated above, the desires of all concerned to the point that a *philosophy* maps out our path in the field of rehabilitation.

Philosophy of Operations

As a boy, I lived in a small Kansas town that was a railroad shipping point for cattle. The beaves were kept in a large field for days before being shipped out. They wore paths from watering trough to feed box, to shade. There was no name for the paths but only a goal at the end of the paths. Many paths were worn yet each

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equally finding its goal, but each equally unnamed. So it is with the Medical Department's contribution to the rehabilitation of our fellow human beings. We hope our paths lead to a worthy goal.

We fit into the medical schema as illustrated simply in Table No. 1. As you can see, the first phase is the most effective phase; the second phase is the most dramatic; the third phase in most medical circles throughout the country is most neglected. The second phase deals with acute illness and chronic illness. The third phase, rehabilitation, deals with the chronically disabled by definition. However, it should rightly be consulted into helping treat the chronic and even the acute stages of any medical problem.

Table 1
TREATMENT PHASES OF MEDICAL PRACTICE

1. Preventative
2. Curative
   a. Acutely Ill
   b. Chronically Ill
3. Rehabilitation
   a. Chronically Ill
   b. Chronically Disabled

This is not interference or usurpation on the part of physical medicine and rehabilitation, nor is it unrequited poaching in an alien medical domain. On the other hand, it infers that rehabilitation is a philosophy rather than a medical specialty. It cannot be divorced from any medical practice. The artificial delineation of work areas hampers the expected fruition of medical endeavors. A crude illustration — A surgeon may remove a red hot appendix from a patient, but the technical removal is not enough. He must apply rehabilitation principles by removing the diseased organ, but then he must apply postoperative care to the goal of getting that patient back to his work, his home, his family, and his normal life at the highest level of function as rapidly and as economically as possible. This defines rehabilitation.

Likewise, rehabilitation institutions must apply the same basic criteria of rehabilitative endeavors. However, with the staggering complexity of emotional and psychological life, economics of today, advancing medical science, compounded social science, the job is too complex for one institution to provide all the phases of rehabilitation in one neatly wrapped package. We are finding it much more practical to have an acute hospital, a chronic hospital (which is Arkansas' number one medical need in my estimation), a medical rehabilitation hospital, a work evaluation center, and a vocational rehabilitation center.

Hot Springs Rehabilitation Center Not a Hospital

Hot Springs Rehabilitation Center is not a hospital, it is a school; the clients are not patients, they are students; they do not wear pajamas, they wear clothes; the institution is not under the Department of Health, it is under the Department of Education; the clients are not admitted by a physician, they are admitted by a Rehabilitation Counselor. In the course of his rehabilitation training, if the student needs hospitalization, he is sent to a hospital, not for the chronic disability, but for the acute medical problem. And, yet, he is sent to the hospital in order to expedite the procedure of getting him back to his community and home at the highest attainable functional level as rapidly and as economically as possible.

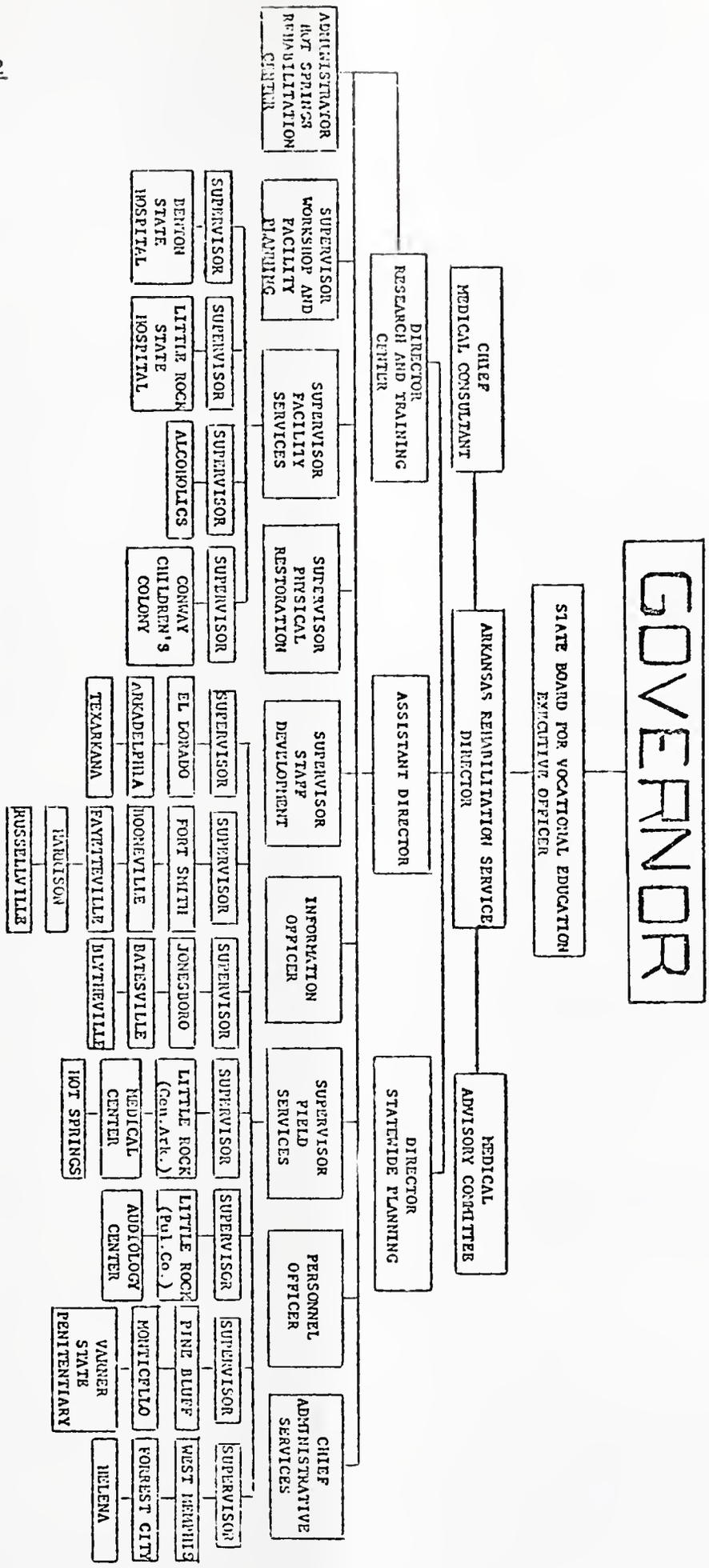
ARS Table of Organization

We at Hot Springs are geared to the vocational rehabilitative aspect of Arkansas' overall rehabilitation plan. Tables Nos. 2and 3 give the table of organization of Arkansas Rehabilitation Service. Table No. 4 gives the table of organization of Hot Springs Rehaiblitation Center. Mark you, the departments are not listed in order of importance as much as we of the Medical Department would choose to believe.

Brief History of HSRC

The history of Hot Springs Rehabilitation Center indicates how we got to be a vocational rehabilitation center. The institution started as Army and Navy Hospital in 1887. The present Administration Building was built as a hospital in October, 1933. It was taken over as State Vocational Rehabilitation Center on April 1, 1960, and the first students were accepted on January 2, 1961. The first Medical Director was Dr. Shelby Gamble, who was not from a medical rehabilitation center but from a vocational rehabilitation center in Okmulgee, Oklahoma. It was accepted by the State of Arkansas under Public Law 86-323, McClellan-Norrell Bill, in which the Secretary of the Army was instructed to transfer the real property belonging to the

Table No. 2


GOVERNOR
STATE BOARD FOR VOCATIONAL EDUCATION
EXECUTIVE OFFICER
ARKANSAS REHABILITATION SERVICE
DIRECTOR
MEDICAL ADVISORY COMMITTEE
CHIEF
MEDICAL CONSULTANT
DIRECTOR
RESEARCH AND TRAINING CENTER
ASSISTANT DIRECTOR
DIRECTOR
STATEWIDE PLANNING
CHIEF
ADMINISTRATIVE SERVICES
ADMINISTRATOR
HOT SPRINGS REHABILITATION CENTER
SUPERVISOR
WORKSHOP AND FACILITY PLANNING
SUPERVISOR
FACILITY SERVICES
SUPERVISOR
PHYSICAL RESTORATION
SUPERVISOR
STAFF DEVELOPMENT
INFORMATION OFFICER
SUPERVISOR
FIELD SERVICES
PERSONNEL OFFICER
SUPERVISOR
SUPERVISOR
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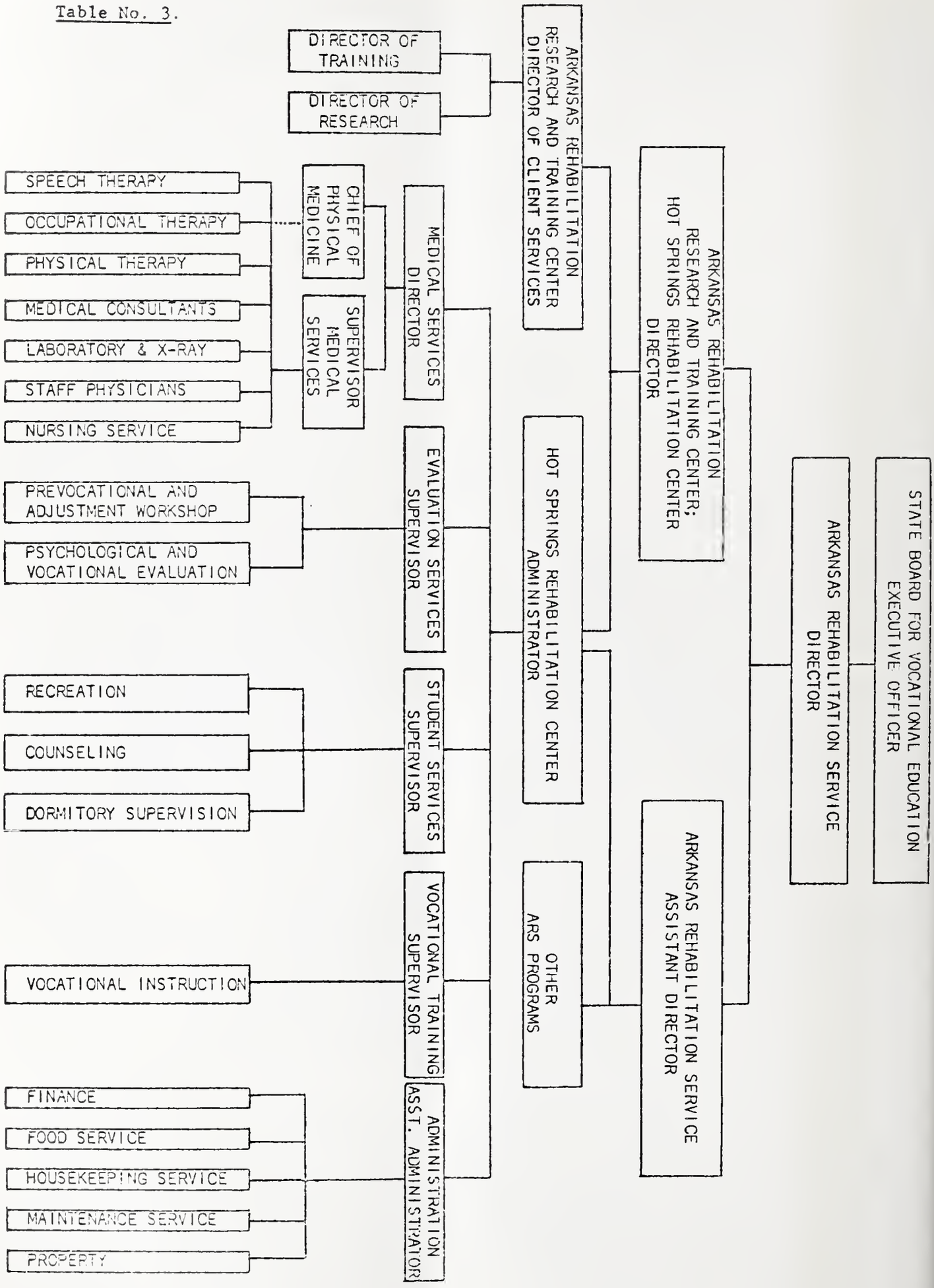
SUPERVISOR
DENTON STATE HOSPITAL
LITTLE ROCK STATE HOSPITAL
ALCOHOLICS
CONWAY CHILDREN'S COLONY
TEXARKANA
ARKADELPHIA
EL DORADO
FORT SMITH
JONESBORO
LITTLE ROCK (Gen. Ark.)
LITTLE ROCK (Pul. Co.)
PINE BLUFF
WEST MEMPHIS
HARRISON
RUSSELLVILLE
FAYETTEVILLE
MOORESVILLE
BATESVILLE
BLYTHEVILLE
MEDICAL CENTER
HOT SPRINGS
AUDIOLOGY CENTER
MONTICELLO
FOREST CITY
VARNER STATE PENITENTIARY
HELENA
12/11/67

Table No. 3.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OTHER
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VOCATIONAL EVALUATION
STUDENT SERVICES
SUPERVISOR
RECREATION
COUNSELING
DORMITORY SUPERVISION
VOCATIONAL TRAINING
SUPERVISOR
VOCATIONAL INSTRUCTION
ADMINISTRATION
ASST. ADMINISTRATOR
FINANCE
FOOD SERVICE
HOUSEKEEPING SERVICE
MAINTENANCE SERVICE
PROPERTY

Table 4
BASIC PROGRAMS AT HSRC

1. Medical
2. Evaluation
3. Training
   - Modified
   - Vocational
   - On-The-Job
4. Work Adjustment
5. Behavior Modification
6. Personal Adjustment
7. Placement and Follow-Up

Federal Government (Army-Navy) to the State of Arkansas for "a vocational rehabilitation center or other health or education purposes." As time has elapsed, there has been periodically tendencies for changing the nature of the vocational rehabilitation center to a medical rehabilitation center. The lack of proper chronic hospital facilities throughout the state has encouraged this along with the fact that certain of the professionals within the Medical Department itself are hospital oriented and trained rather than vocationally rehabilitation oriented. It remains however a vocational rehabilitation institution.

Medical Department Objectives

The objectives of the Medical Department of Hot Springs Rehabilitation Center is condensed in a rhetorically simple but personately complex sentence. The primary purpose of the Medical Department at Hot Springs Rehabilitation Center is to care for the students receiving services in any aspect from this institution. Amongst the secondary duties of the Medical Department are:

1) Staff emergency on-the-job injuries to allow safe removal of injured employees to outside doctor's office. This is to protect both the employer and the employee, particularly when adequate notation is made of the circumstances of the case.

2) Pre-employment physical examinations are given on certain students; that is, food handlers, student union employees, and certain others.

3) An employee of HSRC whose department head feels that a physical examination should be done in the interest of the institution can request such, and this is done by the Medical Department.

4) Certain Crippled Children's Division cases of amputations are examined at HSRC.

5) Medications are furnished for the chronic diagnosis of newly accepted students, students that are seen at Health Call, or students referred to outside doctors by HSRC Medical Department. Furthermore, seven days' supply of medication is sent home with the student when he is dismissed. Acute medication is given when the student is seen at Health Call, by a listed consultant, or when referred to a doctor by the HSRC Medical Department.

6) An Infirmary is maintained to take care of cases that are too sick to remain in the dormitory room, but do not need all the equipment and attention given in a general hospital.

7) HSRC Medical Department fills out reports, forms, carries on meetings and gives orientation to students as they enter the institution.

8) Medical Department gives medical examinations to all students who compete in team sports under the sponsorship of HSRC.

9) Medical Department affords special clinics which include Medicine, Podiatry, Dentistry, Ophthalmology, Neurosurgery, Orthopedic, Amputee, Urology, and Radiology. A visiting Psychiatrist gives advice to counselors and students who were psychiatrically treated prior to enrolling in Hot Springs Rehabilitation Center. Beyond this, individual cases can be referred to any specialty that is represented in the Hot Springs area or in the various clinics in University Medical Center in Little Rock.

10) Medical Department is deep in the education of the rehabilitation oriented workers and students in ancillary fields, that is, student nurses, physical therapy trainees, occupational therapy trainees, LPN students, student counselors, and so forth. We feel morally obligated to help in the interests and training of others to join us in the effort of rehabilitaiton.

11) Medical Department performs research in proposing new tools and methods of our trade, or assessing the validity and applicability of the fruits of others' research.

12) Health Call is at 8:00 A.M. A staff physician is on call at all itmes. No student is allowed to remain in his room due to illness. If the student is ill beyond going to class, he goes either to the infirmary or to the hospital. In night call, illness is reported to the Housemother, who thence reports to the staff nurse, and she makes the decision as to dispensation of the

case. Counselors do not act on a consultant's recommendation without conferring with the proper full time Center physician for approval of such recommendation. A medical consultant's work is on a retainer basis; work outside the Center is paid extra, on a fee for a case basis. All students will be given a medical examination within two days of their admission.

Medical Department Personnel

As I stated previously, we live in an age of specialties, not only in Medicine, but in economics, politics, sciences, socialities, yes even in the artistic and religious facets of our lives. I also inferred that we are seeing the same specialization evolve in health related institutions. So it is with departments in these institutions and even sections of those departments. Thus, the guiding hands (erstwhile straw-bosses) of the sections of the Medical Departments are specialists in their own right. The sections which we have that offer services to our clients are shown on Table No. 6.

Table 5
MEDICAL SERVICES AT HSRC

1. Speech Therapy
2. Occupational Therapy
3. Physical Therapy
4. Special Clinics
5. Laboratory Services
6. X-ray Services
7. Nursing Services
8. Orthotics
9. Counselor Assigned

In the rehabilitation professions, it becomes obvious early in the practice of this profession that it is impossible for any one professional persno to become expert in all phases of rehabilitation. Thus, the success of his own practice depends on how effectively he is able to use the skills of other professional people.

There are many important tasks that can be performed by aides or on-the-job trained that do not require four or five years of training formally. There are many jobs delegated to the physician customarily that could be performed by his trained ancillaries. To require such services be limited across the board by requiring a physician's prescription seems a bit constricting. Some of our rehabilitation efforts, particularly *long-term hospital-like* regimens, foster patients' dependence instead of their independence. This also is a result of certain "staid and customary" flow patterns of rehabilitation, and will discourage experimentation, limit innovation, penalize imagination, and increase manpower shortages. The highest amount of rehabilitation attainments seems to evolve from case management which focuses on that particular facility level rather than "substituting one institutional bed for another."*[1]

Problems

There are many obstacles yet to be surmounted in clearing unobstructed paths to fullest rehabilitation. Although superficially unrelated, these problems may have a deeper common ground than one might suppose. I would like to list a few of these for your consideration:

1. One problem is that many patients who respond well to medical services may be poor candidates for rehabilitation.

2. Another problem — the professional staff's interest in employment is usually greater than the patient's interest. Thus, we carry on rehabilitation on the professional staff's level oblivious of the signs of poor motivation on the part of the patient.

3. A third problem is that employment requires all the person's capabilities to adjust to complex changing situations, regardless of his physical status. Due to disability, he is coddled in the rehabilitation environment; thus, he is frequently unprepared for the required self-adjustment and self-discipline as demanded by outside environment.

4. A fourth problem is that of the Field Counselor fully understanding the labor market.

5. A fifth problem is that to be effective vocational training must be practical in all respects. This is a much more difficult task in an artificial environment of a rehabilitation center than one would suspect.

6. It is of utmost importance that each member of the "rehabilitation team" can see his own service as a part of a total complex of services required by the patient for his fullest rehabilitation.

7. Industrial zoning laws stymie the homebound employee who could possibly function in a quasi-artificial or sheltered environment.

8. No one can deny that, for the most part, the successful procurement of health care of any kind, rehabilitation included, is related to dollars and must answer to dollars.

9. In rehabilitation, we still buy great amounts of out-and-out medical care, in hospitals particularly, poorly related to total rehabilitation efforts. We are spending an inordinate amount of money unilaterally out of our meager rehabilitation dollars for a truly disorganized way of providing rehabilitation services.

10. In almost every emerging profession, it is materialized too often as a device for insuring the profession's self-preservation first and the quality of care to the people afterward.

11. Are we really convinced that productive employment is synonymous with remunerative employment?

12. It is of utmost importance that we coordinate all the utilizeable personnel who are interested in rehabilitation and helping others.

Immediate Goals

As far as my immediate goals here at the Center, I have listed four items which I feel deserve attention.

1. We need to get quadriplegics and paraplegics out of the University of Arkansas and other acute medical centers earlier and also get them into our Center before the *"breakdown to inertia"* sets in.

2. We need to establish closer liaison and rapport with the client's family physician.

3. We need to get the salaries of rehabilitation workers in the medical department up to realistic levels which befit the training, knowledge, experience, and dedication that these workers exemplify.

4. We need to create interest in and publish the need for establishing a chronic hospital in Arkansas.

5. We need five and ten year follow-up studies on the post-rehabilitation course and performance of our clients irrespective of the bookkeeping hamstring of counselor close out.

Types of Cases

The Medical Department of HSRC accepts all types of chronically disabled individuals. This includes spinal cord injuries resulting in quadraplegia or paraplegia, arthritis, degenerative central nervous system disease, limited hemiplegia, cerebral injury, orthopedic disabilities, certain respiratory pathologies, peripheral neuropathies, and peripheral vascular cases. It does not receive psychiatrically disabled individuals. Likewise, it accepts only an extremely limited and selected group of cardiac cases.

Grossly, the touchstone for accepting a client for training encompasses the following criterion. He must be able to attend therapy or training sessions at least six hours a day. He must have the motivation, intelligence, retention, and stamina to reasonably expect trainability. He must have moral and disciplinary self-control to the point that he will not interfere with the training of others.

Referral Procedures

The physician cannot admit a client to Hot Springs Rehabilitation Center nor can he deal directly with any staff member of that institution. He must refer the case to one of the ninety-nine Field Counselors (RC) who are conveniently distributed throughout the state. The RC organizes all initial data, submits the application to the Hot Springs Rehabilitation Center Admissions Committee, and coordinates the case from its inception to its closing. He is the proper liaison between local doctor and HSRC, between the institution and home.

Summary

In summary, then, the rehabilitation phase of any patient must be carefully planned, prescribed, organized, and nursed along as sagaciously as the other phases of medicine. As such, rehabilitation requires the team approach in a specialty melieu — specialty of individual rehabilitators and specialty in type of rehabilitation institutions.

Vocationally, society pays for the knowledge in our heads and the skills in our hands. Physically, healing is a matter of time. Rehabilitatively, healing is a matter of opportunity.

Physical disability is only one problem in the many problems involved in the complex situation of achieving employment. Come what may, in the course of the handicappeds' education, to fail in rehabilitation is less a problem than never to have tried at all.

REFERENCES

*1. Hipkins, T. P.: Rehabilitation has Outlined its Usefulness. J. Rehab. 36:12-17, 1907.

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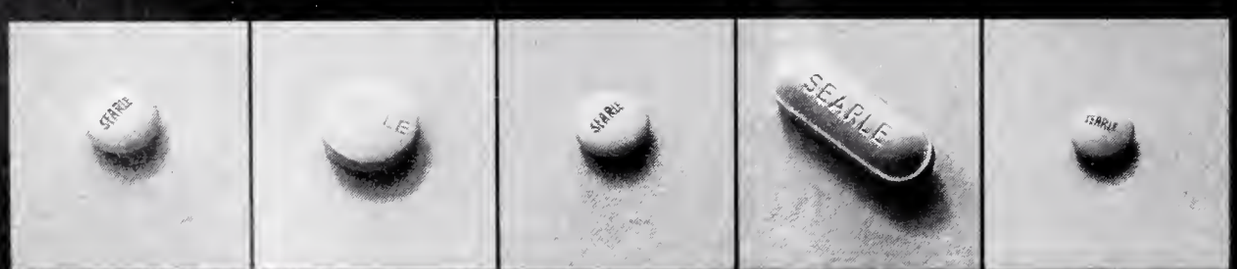

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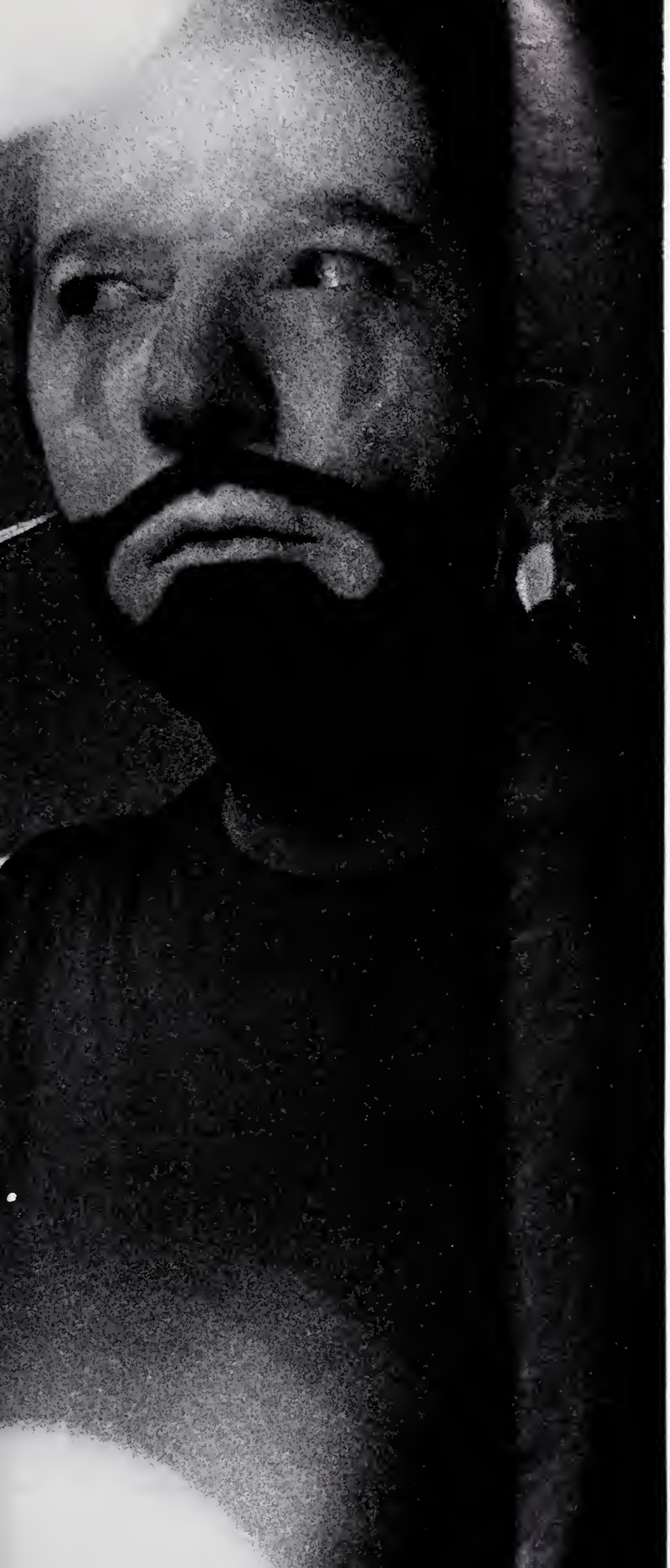

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Indications: Peptic ulcer, gastroenteritis, pylorospasm, biliary dyskinesia, functional hypermotility and irritable colon.

Contraindications: Glaucoma, severe cardiac disease.

Precautions: Since varying degrees of urinary hesitancy may occur in elderly men with prostatic hypertrophy, this should be watched for in such patients until they have gained some experience with the drug. Although never reported, theoretically a curare-like action may occur with possible loss of voluntary muscle control. Such patients should receive prompt and continuing artificial respiration until the drug effect has been exhausted.

Side Effects: The more common side effects, in order of incidence, are xerostomia, mydriasis, hesitancy of urination and gastric fullness.

Dosage: The maximal tolerated dosage is usually the most effective. For most adult patients this will be four to six 15-mg. tablets daily in divided doses. In severe conditions as many as two tablets four to six times daily may be required. Pro-Banthine is supplied as tablets of 15 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg. The parenteral dose should be adjusted to the patient's requirement and may be up to 30 mg. or more every six hours, intramuscularly or intravenously.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
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(thiopropazate dihydrochloride)

Indications: Peptic ulcer, spastic constipation, nonspecific gastritis, functional gastrointestinal disorders, pylorospasm, hyperhidrosis, irritable bowel syndrome, mucous or ulcerative colitis, functional diarrhea.

Contraindications: Glaucoma, severe cardiac disease.

Warnings: Pro-Banthine with Dartal should not be administered to patients who are under the influence of barbiturates, alcohol or narcotics. The drug should be administered cautiously to epileptic patients or those in depressed states, patients with liver disease and to pregnant women. Hypersensitivity to Dartal may occur rarely in patients with known sensitivity to similar drugs.

Side Effects: Dryness of the mouth, mydriasis, hesitancy of urination; less commonly extrapyramidal (restlessness, dystonia and signs of pseudoparkinsonism such as muscular rigidity, fixed facies, tremor, ataxia, festinant gait and drooling), parasympatholytic (blurred vision, xerostomia, hypotension, nasal congestion and constipation) and curare-like (loss of control of voluntary muscles, particularly the muscles of respiration) reactions. Rarely, leukopenia or allergic purpura. A generalized erythematous skin reaction may occur. Side effects characteristic of phenothiazines such as grand mal convulsions, altered cerebrospinal proteins, cerebral edema, potentiation of the effects of atropine, heat or phosphorus insecticides, autonomic reactions, endocrine disturbances, reversed epinephrine effect, hyperpyrexia or pigmentary retinopathy may theoretically occur but have not been reported with Dartal. Severe hypotension following recommended doses occurs more commonly in patients who are also afflicted by other medical disorders such as mitral insufficiency or pheochromocytoma, and particular attention should be paid to such a possibility although this has not been observed with Dartal.

Adult Dosage: One tablet three times a day.

Pro-Banthine® 15 mg.
(propantheline bromide)
with
Phenobarbital 15 mg.

Warning: May be habit-forming.

For *Indications, Contraindications, Precautions, Side Effects* and *Dosage* see Pro-Banthine. In addition, phenobarbital should be administered with caution to patients with liver disease, mental disturbances or a significant degree of hypoxia.

Pro-Banthine P.A.®
prolonged acting brand of propantheline bromide

For *Indications, Contraindications, Precautions* and *Side Effects* see Pro-Banthine.

Dosage Form: Capsule-shaped, compression-coated, peach tablets of 30 mg. for oral use.

Dosage: The recommended initial dosage is one tablet in the morning and one at night.

084

SEARLE

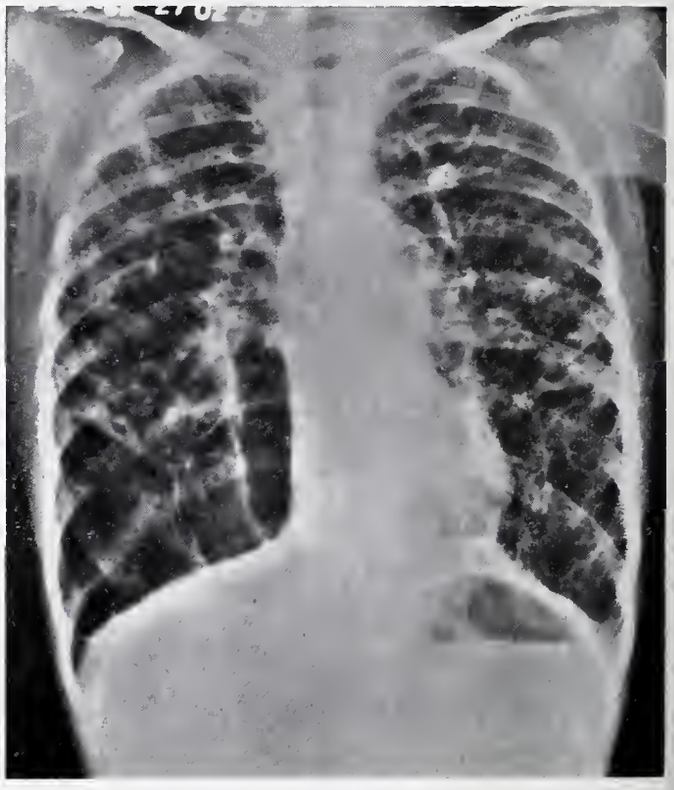
Research in the service of medicine.
G. D. Searle & Co., Chicago, Ill. 60680

RADIOLOGY CASE OF THE MONTH

Prepared by the
Department of Radiology, University of Arkansas
School of Medicine, Little Rock

See Answer on Page 414

Phillip Smith, M.D.



HISTORY: This 10 year old white female presented with a long history of relatively mild respiratory symptoms of chronic cough and dyspnea. She had had a spontaneous pneumothorax one year prior to this film. She also had a long history of chronic ear infections with numerous episodes of draining ears.

PUBLIC HEALTH AT A GLANCE

Tuberculosis in Arkansas

Tuberculosis continues to be a major public health problem in Arkansas. As a part of a continuing control program, the Communicable Disease Division of the State Health Department maintains follow-up on approximately 5,000 cases of tuberculosis. In 1969, 577 new active cases were added to the 32,000 previously recorded cases. There were 48 deaths attributed to tuberculosis in Arkansas last year.

To prevent the spread of disease, active cases of tuberculosis must be identified and medically treated. The case-finding program of the Tuberculosis Program is based on: (1) tuberculin skin test reactors (there are an estimated 350,000 reactors in Arkansas); (2) referrals from private physicians; (3) medical evaluations of known suspects found through x-rays of high risk groups; and (4) medical evaluations of contacts.

High risk groups are screened for new cases by a mobile unit which x-rays positive skin test reactors. The high risk groups from which new cases may come are:

1. Inactive cases and those with positive PPD and a chest lesion.
2. General hospital admissions.
3. Jail admissions.
4. Persons in greater risk areas that may become infected; i.e., medical personnel, chronic disease patients, and pregnant women.
5. Persons who can infect others; i.e., school teachers.

The Communicable Disease Division, in support of case-finding and case management activities, offers services in local chest clinics in 61 of the 75 counties of Arkansas. Forty-seven physicians in private practice act as consultants in the chest clinics. A number of these consultants are specialists in respiratory disease and all have received special training in tuberculosis control.

There were 10,468 clinic visits made in 1969. Each clinic patient is seen by a public health nurse and the attending chest consultant. The x-rays are done in local hospitals, private clinics, and health units. Each clinic is equipped with a nebulizer for sputum collection. Samples are sent to the State Laboratory for examination within 24 hours following collection. The laboratory performs concentrated smear examinations and cultures and drug sensitivity tests on each sample. The physician receives test results when concluded so he may select the proper method and drug treatment for each patient.

There have been three studies made over the past five years on Arkansas' tuberculosis control program. The first study was in 1966 by Dr. Carl H. Pfuetze who is General Administrator, Suburban Cook County Tuberculosis Sanatorium and Clinical Professor of Medicine at the University of Illinois in Chicago, and by Dr. J. V. Stocklen, Controller of Chronic Illness and Tuberculosis for Cuyahoga County, Cleveland, Ohio.

Dr. Pfuetze and Dr. Stocklen made this recommendation: "That all phases of tuberculosis control conducted by the State of Arkansas, specifically the operation of the Division of Tuberculosis Control and the operation of the Arkansas Tuberculosis Sanatorium in Booneville, should be placed under the direction of the Arkansas State Board of Health."

A second study by the Health Planning Advisory Council made the following recommendation: "It is recommended that all state financed tuberculosis programs be under the administration of a single agency."

Dr. William Lester, Chief of Chest Medicine Service at National Jewish Hospital in Denver conducted the third study, which was of the Tuberculosis Chemotherapy Program at Jeffer-

son Hospital in Pine Bluff. Dr. Lester's recommendations included the following: "It is my firm conviction that this program represents a major demonstration of the effective delivery of medical care to patients combined with remarkable dedication on the part of all concerned; result being an amazing demonstration of the efficacy of modern chemotherapy in the treatment of tuberculosis today."

Dr. Lester's conclusions were: "1. The program at Jefferson County Hospital in the 12 county area is excellent and must be supported. 2. Greater use should be made of the program as a teaching demonstration of delivery of good medical care. 3. If no other sources of funds can be found, the Jefferson Hospital Program should be supported by a pro-rata reduction in the budget of the State Sanatorium Board."

All three studies have come to the same basic conclusions: that a tuberculosis patient can be successfully treated at a local hospital with advantages to the patient and to the state; that if a patient can be treated near his home and family, the goal of rehabilitating and returning him to a productive role in society can be more readily achieved; and that the average time spent in the local hospital will be about 26 days with the stay in a sanatorium being about 200 days.

Tuberculosis in Arkansas can be controlled and eliminated if the following objectives are met: 1. All individuals who are able to infect others with tubercle bacilli become non-infectious; 2. All individuals who are infected with tubercle bacilli are kept non-infectious; and, 3. All individuals non-infected with tubercle bacilli remain non-infected. The activities of the Communicable Disease Division, State Health Department will be conducted in keeping with these objectives.

Enzyme Sensitization in Consumers of Enzyme-Containing Washing Powder

L. Belin et al (Institute of Microbiology, Göteberg, Sweden)

Lancet 2:1153-1157 (Dec 5) 1970

Adverse reactions in the eyes or airways in connection with the use of enzyme-containing washing powder are described in three female consumers. Prick tests resulted in immediate skin reactions to test enzyme solutions in concentrations which do not give nonspecific weal reactions. Circulating IgE antibodies to the enzyme were also demonstrated. Information about the sensitizing allergen in the enzyme preparation was obtained by skin testing with fractions of the gel-filtered and electrophoretically separated enzyme preparation (Alcalase). The antigenicity of the enzyme preparation was tested by parenteral immunization of a rabbit. These analyses indicated that the allergen was immunogenic in the rabbit and, furthermore, it was identical with the main enzymatically active fractions obtained by gel filtration and electrophoresis. The danger of sensitization is not restricted to employees manufacturing enzyme-containing washing powder but may arise in every situation where these enzymes may be present as dust particles.

Coronary Care Unit in General Medical Ward

J. D. Eddy and J. Mackinnon (Dudley Rd Hosp, Birmingham, England)

Brit Heart J 32:733-737 (Nov) 1970

During a period of 16 months, 611 patients were admitted to a coronary care unit situated within a general medical ward. The diagnosis of acute myocardial infarction was confirmed in 461 (75.4%) and the results of treatment are described. The mortality rate for the period of admission to hospital was 19.1% and the mortality in the unit was 13.7%. Eighteen patients, who would have died without resuscitation, survived and left hospital. Ventricular fibrillation occurred in 41 (8.9%) patients, early resuscitation was successful in 23 and 14 left hospital. Asystole was the cause of cardiac arrest in 31 (6.7%) patients, most of whom had extensive heart muscle damage. Resuscitation was unusual in these patients. Complete heart block occurred in 31 (6.7%) patients and all were electrically paced; 16 returned to sinus rhythm and 14 left hospital. The disadvantages of a coronary care unit in a busy general ward are discussed, and although results comparable to those obtained in purpose-built units may be obtained, it is desirable that units should have separated accommodation whenever possible.

EDITORIAL

The Practice of Medicine — A Dichotomy Editorial

Alfred Kahn, Jr., M.D.

The practice of medicine represents an unusual dichotomy. Medical practice seems to be moving in two directions: general practice and super-specialization. This insinuates that the areas of broad specialization are beginning to diminish. This raises some interesting points of discussion.

First of all, is the emphasis on the general practice of medicine a valid one? The answer has to be a qualified yes. It is yes in the sense that the general physician is needed in both the small and large communities; in the former because he represents the broadly deployed, most necessary first echelon of medical care. The general physician in the larger community has definitely upgraded medical care; fortunately for the public and for medicine there has been an increase in the number of general physicians based throughout the geographic area of the larger Arkansas cities. The reason why the emphasis has to be somewhat qualified is that a new general physician trained in just a one-year internship can hardly amass the vast facts pertaining to his practice in one year; the qualification can be removed if he gets additional training beyond his one year's internship. If the general physician pursues additional training, the distinction between the generalist and the general specialist becomes less, particularly in the smaller communities where it is paramount that the general physician be able to perform certain types of surgery, read electrocardiograms, etc. All of this has to be viewed in perspective, as the subspecialities are fragmenting from the so-called general specialities at astronomical speeds.

The practice of specialty medicine is moving away from some of its original concepts and this represents a mixture of good and bad as measured in terms of patient care. The pupils of Halsted's were surgeons who were meticulously trained in the fundamentals of surgery and then were taught to apply this training appropriately modified, in many surgical areas as the adbomen, extremities, skeletal system, etc. Historically there has been a splintering off of surgical subspecialities into orthopedics, urology, neurosurgery, etc. This same subdividing is now becoming apparent in the subspecialty of internal medicine as the subspecialities of allergy, cardiology, endocrinology, gastro-enterology, infectious disease, etc. The Oslerian concept of a well rounded internist practicing in the broad field of internal medicine seems to be disappearing. The stimulus for subspecialization appears to be the geometric progression of information in these fields. If most of this information represents a substantial progress in the control of disease, then this further subspecialization seems valid and worthwhile. If the outpouring of research is sterile and the facts and technique are relatively static, and if the mechanical applications are not too complex, then the subspecialty is not worthwhile.

A further question to answer is what is happening in the broad specialty fields after the subspecialists splinter off? Does the broad specialist become a superspecialist by default? Are general surgeons now abdominal surgeons in a superspecialty — and having arrived there by default. Are the internists going to be general physicians who cannot perform surgery and

obstetrics — and if so why take the extra training when the two and three year trained family physician is adequately covering this area of practice? What is the niche of the broadly trained specialist in the major specialities of medicine, surgery, pediatrics, and obstetrics-gynecology? While the super-specialization may sharpen the skill of the super-specialist, does it do so at the expense of wearing blinders to the overlaps of symptoms and diseases from other related fields into the super-specialist's own area? Dogmatic answers cannot be given to these questions. They have to be viewed in context and this means in terms of the geographic area and the socio-economic milieu as well as the total patterns of customary delivery of medical services.

Not alone does medicine need to ponder these problems but so do hospitals. In the smaller community the hospitals will be oriented toward general practice and properly so; however, in many small communities specialists are now appearing in general surgery and general internal medicine. What modification of staff structure is deemed desirable in light of this? In larger communities are the divisions of general surgery and internal medicine going to disappear with the bed space allotted to the super-specialists? If the latter is the case, should there be separate, sectional meetings of the superspecialty? Will the broad specialist be an office based referral service? Is the superspecialist using the hospital base for office procedures? Should hospitals move on to progressive care with provisions for ambulatory cases, moderately ill cases, seriously ill cases, and chronically ill cases to provide the patients with a broader spectrum of care and allow a better integration of specialties into the overall hospital scheme or is this economically wasteful when private offices can supply much of this need? The answers to all of this are thorny; there are proponent of no change, some change, and many changes.

The one thing that is certain is that the practice of and the delivery of medical services is not static. There will be changes and our main objective is to stimulate unhurried, contemplative planning for thte betterment of patient's care.

ANSWER—Radiology Case of the Month

DIAGNOSIS:

Histiocytosis X by lung and mastaid biapsy.

DISCUSSION:

The chest raentgenagram reveols numreous emphysemotous blebs af varying sizes, alang with o coarse reticulor pattern known as "haney-comb" lung. Some nodularity may be present. Spontoneous pneumathorax in o child is mast likely due to on interstitiol disease. The most comman interstitial lung diseases in children ore:

1) Histiocytasis X
2) Tuberous sclerasis
3) Niemann-Pick
4) Sorcoidosis

Histiocytasis X in children frequently exhibits chronic mastoiditis with droining ears. The lorge lucent oreas in the right mastoid were proven by biopsy to be due ta histiacytosis X.

This potient was treoted with Velbon ond irradiotian, using telecobolt 60, with clinicol improvement olthough residual fibrosis remained.

REFERENCE:

Caffey, John: Pediatric X-ray Diognosis. 5th Edition. Yeorbook Medical Publishers, 1967.

THINGS TO COME

Postgraduate Course
Chronic Inflammatory Disease of the Gut

Sponsored by American Gastroenterological Association.

Date: July 29-31, 1971.

Place: Aspen, Colorado.

Course Chairman: Marvin H. Sleisenger, M.D., Professor of Medicine and Vice Chairman, Department of Medicine, University of California School of Medicine.

Associate Chairmen: Fred Kern, Jr., M.D., Professor of Medicine and Head, Department of Gastroenterology, University of Colorado School of Medicine, and Jerry S. Trier, M.D., Associate Professor of Medicine, Boston University School of Medicine.

For information write to: Mrs. Bernie C. Kern, 740 Krameria Street, Denver, Colorado 80220.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

President Nixon promised that every effort will be made to keep bureaucracy at a minimum in connection with his new overall national health program even before he disclosed its details.

". . . We do not want the doctors and those in the medical profession to be smothered under a whole, huge bureaucracy and under a great pile of government forms," he said in a speech at the 20th annual meeting of the American College of Cardiology prior to his accectance of the college's 1971 Humanitarian Award.

Nixon said he recognized that there is no program for medical care that would be good for the patient unless it is supported by physicians and has the cooperation of the medical profession.

"So we want your advice, we want your cooperation, we want to work together with you in developing a program that will do what is needed to be done and do the best for our patients, your patients, but also that will enable you to meet your responsibilities as unhampered as is possible by federal bureaucracy, red tape and the like," he said.

"That is our objective and I will simply say . . . that as this debate goes on through the year that I know that we will have your cooperation.

"I know the dedicated men and women that are in this profession. And I can assure you that we will listen. We want your advice because, as I said in the state of the union message, we have one great goal."

In the state of the union message, the president said:

"As a fourth great goal, I will offer a far-reaching set of proposals for improving America's health care and making it available more fairly to more people.

"I will propose:

"A program to insure that no American family will be prepented from obtaining basic medical care by inability to pay.

"I will propose a major increase in and redirection of aid to medical schools, to greatly increase the number of doctors and other health personnel.

"Incentives to improve the delivery of health services, to get more medical care resources into those areas that have not been adequately served, to make greater use of medical assistants and to slow the alarming rise in the costs of medical care.

"New programs to encourage better preventive medicine, by attacking the causes of disease and injury, and by providing incentives to doctors to keep people well rather than just to treat them when they are sick.

"I will also ask for an appropriation of an extra $100 million to launch an intensive campaign to find a cure for cancer, and I will ask later for whatever additional funds can effectively be used. The time has come in America when the same kind of concentrated effort that split the atom and took man to the moon should be turned toward conquering this dread disease. Let us make a total national commitment to achieve this goal.

"America has long been the wealthiest nation in the world. Now it is time we became the healthiest nation in the world."

In his budget message, Nixon said he would send to Congress a message "that will set out a national health strategy for the seventies and propose significant changes in the federal role in the nation's system of health care."

"This strategy will seek to expand preventive care, to train more doctors and other health personnel, to achieve greater equity and effi-

ciency in the delivery of health services," he said. "It will include a new health insurance program for all low-income families with children."

* * *

The Nixon Administration asked Congress for tighter government control over any peer review setup for medicare and medicaid than would be provided by the so-called Bennett amendment approved by the Senate last year.

Elliot L. Richardson, secretary of Health, Education and Welfare, told the House Ways and Means Committee:

"We agree with the objective of assuring an expanded role for the medical profession in peer review activities and recognize the need for improvement of utilization review procedures. However, certain modifications in the senate provisions would be desirable. For example, we do not think that the secretary of HEW should be required to use medical-society sponsored groups in situations where there may be a highly qualified review organization in the area that has already demonstrated its ability to perform well. We also favor giving the secretary some flexibility to permit, through regulations, variations in the structure and patterns of operation of peer review groups."

Richardson was testifying on H.R. 1 of the 92nd Congress. The social security measure includes provisions for peer review and other changes in medicare and medicaid. Both chambers of Congress passed such legislation last year but the senate added so many amendments to the house-passed bill that congressional leaders decided it would be futile for a house-senate conference committee to try to reconcile the differences. The house committee made the legislation the first order of business this year and the legislation was expected to get through Congress within a few months.

Richardson again asked for authority to use health maintenance organizations (HMO's), or prepaid group practice, for the government programs. He also renewed a request for authority to limit physicians' fees and other provider costs under medicare. Both provisions were approved in varying forms by the house and senate last year, and consequently it appeared likely that some versions of them, along with peer review, would become law in the first half of this year.

Richardson said HMO's would mean progress toward "our goal of emphasizing preventive medical care." He added:

"We believe that HMO's can help solve many of the problems facing the health care system today — the uncontrolled rise in health care costs, over-utilization, particularly of high cost services, disorganization, improper allocation of resources, inadequate emphasis on preventive care and inefficient use of available health manpower. In the long run, the encouragement of HMO's may be the most important step we can take to stimulate the restructuring of the health delivery system. We hope that health maintenance organizations, and their use by beneficiaries, will expand greatly in the future, and we believe that there can be significant long-run savings in program costs due to the HMO option."

Concerning the proposed limitation on increases in physicians' fees, Richardson said:

"Another major change relating to medicare reimbursement that is recommended by the Administration is one which would limit medicare's recognition of prevailing charge increases to rates that economic data indicate would be fair to all concerned. We believe that if recognition of fee increases is tied to appropriate economic indexes, this will help to assure that the recognition of such increases is appropriately related to developments in other pertinent sectors of the economy."

Administration sources said HEW later would seek authority for other economy measures to cut medicare costs. These included:

— Reduction of the 60-day period of hospitalization during which beneficiaries pay relatively little.

— Increase the annual $50 deductible a beneficiary must pay toward his physician's fees under Part B.

— Tighten up on payments to nursing homes for custodial care.

The American Nursing Home Association already has withdrawn official support of the medicare program for extended care and has urged its more than 7,000 nursing home members to re-assess their participation.

"The tragic aspect of the medicare program for extended care is that the Social Security Administration led America's senior citizens to be-

lieve that, if their physicians thought it necessary, they were entitled to 100 days of custodial care at government expense," David R. Mosher, ANHA president, said. "Subsequent rules and regulations issued by SSA have virtually ruled this out."

* * *

A National Commission on VD (Venereal Disease) has been formed to alert the public to the dangers of gonorrhea and syphilis which now afflict an estimated more than 2 million Americans.

Dr. Bruce Webster, New York City, president of the American Social Health Association, was named chairman of the commission which was created by the Department of Health, Education and Welfare to consider the problem of syphilis and gonorrhea from a national standpoint, study ways of bringing public health and private medicine into closer working relationship, and make recommendation for bringing the two diseases under control.

The commission, in seeking to define a national strategy for the better control of the venereal diseases, will submit its recommendations to the various professional groups represented on the commission, as well as to HEW.

Dr. Roger O. Egeberg, HEW assistant secretary for Health and Scientific Affairs, designated the Center for Disease Control, Atlanta, to provide staff support for the commission.

"In 1968, a national incidence survey conducted by the American Social Health Association for the Public Health Service found that although private physicians treat about 80 percent of the venereal disease cases, they report only one in nine to public health officials," Dr. Webster said. "We believe that this commission will serve as the long-needed link between public health and private medicine."

Estimating about 2 million cases of gonorrhea and 75,000 cases of infectious syphilis in the United States last year, the ASHA, which has waged continuing campaigns against the diseases since World War I, said VD had reached pandemic proportions for the third time. The two previous times were at the close of the world wars. Dr. Jesse Steinfeld, Surgeon General of the U.S. Public Health Service, said gonorrhea has gotten "out of control and must be considered a national epidemic of major proportions." Dr. James McKenzie-Pollack, ASHA medical director, said that "for the first time in the penicillin era, we are seeing serious clinical complications of gonorrhea in the female."

Even with only a small fraction of VD cases reported, gonorhea ranks first and syphilis fourth among reportable diseases in the United States.

Early in 1969, ASHA was asked by the American Medical Association, National Medical Association, and American Osteopathic Association to covene 23 health and medical organizations for the purpose of discussing a national VD prevention and control policy. Out of the meeting which followed came the plan for a national commission.

The following professional organizations are represented on the commission:

American Academy of Dermatology, American Academy of General Practice, American Academy of Neurology, American Academy of Pediatrics, American College of Obstetricians and Gynecologists, American College of Physicians, AMA, ASHA, American Public Health Association, AOA, American Urological Association, American Venereal Disease Association, Association of American Medical Colleges, and NMA.

* * *

Plaque in Memory of Dr. Louis K. Hundley Presented

A plaque bearing the engraved portrait of the late Louis K. Hundley, M.D., was presented to Mrs. Hundley by Dr. K. W. Cosgrove, Jr., at a recent Ophthalmology Symposium at the University of Arkansas Medical Center. The plaque will be placed on the door of a new ophthalmology library in the University of Arkansas Medical Center Eye Clinic. Dr. Hundley served as head of the School of Medicine's Division of Ophthalmology in 1966. Previously he had been in private practice in Pine Bluff, Arkansas, for twenty years while serving on the voluntary faculty of the School of Medicine. A 1935 graduate of the University of Arkansas School of Medicine, Dr. Hundley was president of the Arkansas Medical Society in 1958 and served as Vice Speaker of the House of Delegates from 1963 until his death in December 1966. Among his many civic activities, Dr. Hundley held official posts with Rotary International, Pine Bluff Community Concert Association, Jefferson County Boards of Health and Education and the Jefferson County Mental Health Association.

PERSONAL AND NEWS ITEMS

Doctor Moves to Jonesboro

Dr. James H. Hickman closed his office in Walnut Ridge in early February and moved to Jonesboro where he is now associated with Dr. James Robinette at 907 Union Street in Jonesboro.

Physician to Aid in Blood Program

Dr. Kenneth New of Millard-Henry Clinic in Russellville was the physician on call during the February visit of the bloodmobile to that city. Dr. New was available for any special consultation or assistance that was needed according to W. S. Hegmann, general chairman for the Pope County Red Cross blood drive.

Dr. Guenthner Attends Board Meeting

Dr. John F. Guenthner of Mountain Home, a member of the Arkansas State Medical Board, attended the federation of Medical Boards of the United States meeting held in conjunction with the annual Congress of Medical Education of the American Medical Association in Chicago during early February.

Burglars Busy in Harrison

Five Harrison firms, including the offices of Arkansas Medical Society members, Dr. Ross Fowler and Dr. Van Smith, were entered and burglarized in early February. While doors and drawers of cabinets and desk drawers were pried open and forced, little was stolen at either of the offices.

Rubella Vaccine Administered in Polk County

Rubella vaccine was administered without charge to all Polk County children from one through ten years of age in a February program sponsored by the Polk County Medical Society, the school districts, the Polk County March of Dimes, and the State and County Health Departments.

Arkansas Surgeon Heads Three-Day Mid-South Medical Association Meeting

Dr. Glenn P. Schoettle, a West Memphis surgeon who is president of the Mid-South Medical Association, presided at the 82nd annual meeting of the association during last February. The meeting was held at the Sheraton-Peabody Hotel in Memphis, Tennessee.

State Medical Examiner Appoints Hot Springs Deputy

Garland County Coroner, Dr. W. R. Lee, has been appointed as a deputy by State Medical Examiner, Dr. Rodney F. Carlton.

Dr. Davis Opens Clinic in Mount Ida

Dr. James H. Davis, formerly of Salem, recently opened a medical clinic at Mount Ida. Dr. Davis has been in the general practice of medicine at Salem Clinic at Salem, Arkansas for the past seven years.

Dr. DePalma Attends Symposium Of Military Plastic Surgery

Dr. Anthony T. DePalma of Fayetteville attended the Fourth Annual Symposium of Military Plastic Surgery at Walter Reed Army Medical Center in January of this year. The program covered the full spectrum of the specialty with a group of nationally prominent plastic surgeons present as guest lecturers. Dr. DePalma is a Lieutenant Colonel in the United States Army Reserve.

Dr. Shannon Joins University of Arkansas Medical Center Faculty

Dr. Robert F. Shannon, President of the Arkansas Psychiatric Society and part-time faculty member at the University of Arkansas School of Medicine, who has been in private practice with the Arkansas Psychiatric Clinic, Professional Association, of which he was the first president, since its inception in 1965, will rejoin the University of Arkansas Medical Center faculty as full-time Associate Professor of Psychiatry and Director of the Residency Program, effective April 1, 1971. He will continue to be Medical Director of the Adolescent Clinic, a position he has held since 1963.

NEW MEMBERS

Dr. Jack A. Langevin

Baxter County Medical Society announces Jack A. Langevin, M.D., as a new member. Born in St. Paul, Minnesota, Dr. Langevin received his B.S. from the University of Denver in 1953 and his M.D. from the University of Colorado School of Medicine in 1957.

Dr. Langevin did both his internship and a general surgery residency at the United States Naval Hospital in Great Lakes, Illinois. During his tenure there, he held the following positions: Head Tumor Clinic, Head of Pediatric Surgery, and Head of the Department of Surgery.

Board certified and a member of the American College of Surgeons, Dr. Langevin is in practice at the Salem Clinic in Salem.

Dr. James Arledge Holland

Dr. James Arledge Holland is a new member of the Craighead-Poinsett County Medical Society. A native of Canton, Mississippi, Dr. Holland graduated with B.S. from Mississippi College in 1958 and received his M.D. from the University of Tennessee College of Medicine in 1961. His internship was done at Baylor Hospital in Dallas, Texas, and his residency in radiology was completed at Vanderbilt University Affiliated Hospitals in Nashville, Tennessee, in 1966.

After two years service in the United States Air Force, Dr. Holland practiced for two years in Fort Worth, Texas.

Board certified, he is a member of the American College of Radiology and the Southern Radiological Conference. Dr. Holland's office address is St. Bernards Hospital in Jonesboro.

Dr. Joseph T. Wilson, Jr.

Another new member of the Craighead-Poinsett County Medical Society is Dr. Joseph T. Wilson, Jr. Born in Camden, Dr. Wilson graduated from the University of Arkansas with the B.S. degree in 1961 and received his M.D. from that institution's School of Medicine, also in 1961. His internship was done at University Hospital in Little Rock and a pathology residency was completed at U. S. Naval Hospital in Bethesda, Maryland, from 1965 to 1970.

Board eligible, Dr. Wilson is a member of the American Society of Clinical Pathology and the Maryland and District of Columbia Pathology Societies.

Dr. Wilson's type of practice is clinical and anatomical pathology with offices at 411 East Matthews Street in Jonesboro.

Dr. Jack S. Young

Jack S. Young, M.D., is a new member of the Jackson County Medical Society. Born in Texarkana, Texas, Dr. Young received his pre-medical education at Ouachita Baptist University and the University of Arkansas. He graduated from the University of Arkansas School of Medicine in 1964. Dr. Young interned at Kansas City General Hospital in Kansas City, Missouri, before completing residencies in radiology at the University of Oklahoma Medical Center in Oklahoma City and the Arkansas Baptist Medical Center in Little Rock. At the latter, he served as an instructor in nuclear medicine.

Board eligible, Dr. Young's type of practice is radiology. His office address is McLain and Pecan Streets in Newport.

Dr. J. W. Carney

Another new member of the Jackson County Medical Society is J. W. Carney, M.D. Dr. Carney, a native of Greenwood, Mississippi, was graduated from Ouachita Baptist University in 1955. His M.D. was received from the University of Tennessee College of Medicine in 1958. He then did his intership at Baptist Hospital in Memphis, Tennessee.

After three years service as a medical missionary in East Pakistan, Dr. Carney completed a four-year general surgery residency also at Baptist Hospital in Memphis.

Board eligible, Dr. Carney's type of practice is general surgery and his office is located at Second and Laurel Streets in Newport.

Dr. Willis Oren Colyar, Jr.

Ouachita County Medical Society announces Dr. Willis Oren Colyar, Jr., as a new member. Born in Camden, Dr. Colyar attended Ouachita Baptist University for his pre-medical education.

In 1958, he graduated from the University of Arkansas School of Medicine. Dr. Colyar interned at Riverside Hospital in Toledo, Ohio, and did a one-year residency in general surgery at Arkansas Baptist Medical Center in Little Rock. He then serevd two years with the United States Air Force. Now in general practice, Dr. Colyar's office is at 416 Hospital Drive in Camden.

Dr . Albert Louis Baltz

Albert Louis Baltz, M.D., is a new member of the Randolph County Medical Society. A native of Pocahontas, Dr. Baltz attended Christian Brothers College in Memphis and St. Louis University for his pre-medical education. His M.D. was conferred by the University of Arkansas School of Medicine in 1967.

Dr. Baltz did his internship at the Arkansas Baptist Medical Center in Little Rock before serving two years in the United States Air Force. Since his discharge from service in mid-1970, Dr. Baltz has been in general practice at 110 West Broadway Street in Pocahontas.

Selective Damage of Myocardial Mitochondria Due to Emetine Hydrochloride

M. B. Pearce, R. T. Bulloch, and M. L. Murphy (4301 W Markham, Little Rock, Ark 72201)
Arch Path 91:8-18 (Jan) 1971

Emetine hydrochloride was given by injection to 26 mongrel dogs and its cardiac effects were studied by serial hemodynamic measurements, electrocardiograms, and myocardial biopsies. The serial biopsy method used emphasizes a different approach to the study of experimental myocardial damage. Serial ECGs of 16 dogs revealed the following: development of marked T wave change in three, right bundle branch block in ten (due to repeated septal biopsies), and normal ECGs in three. Right and left heart pressures and light microscopy were normal in all animals. Selective myocardial damage limited to the mitochondria was noted by electron microscopic examination of biopsies from 14 dogs. Mitochondrial damage was characterized by partial to complete loss of mitochondrial cristae. Mitochondrial change produced by emetine can be reversible.

OBITUARY

Dr. Evan James Kurts

Dr. Evan James Kurts died February 7, 1971, at the age of thirty-eight. He had lived and practiced in Helena and West Helena for the past ten years.

Born in Union, Mississippi, Dr. Kurts graduated from the University of Tennessee in 1956. He had served as Chief of Staff at Helena Hospital and was a member of the Phillips Medical Society, the Arkansas Medical Society, the Southern Medical Association, and the American Medical Association.

He is survived by his wife, Mrs. Janice Kurts; two daughters; and his parents.

Dr. Paul H. Jeffery

Dr. Paul H. Jeffery, age 88, died February 18, 1971. Born at Mount Olive, he had practiced medicine for 61 years.

Dr. Jeffery was graduated from the University of Arkansas School of Medicine in 1909 and settled in Bethesda in 1914. He was a member of the Independence County and Arkansas Medical Societies and the American Medical Association.

Survivors include his wife, Mrs. Pearl Calaway Jeffery, and one daughter.

Dr. Hugh Jean Mayfield

Dr. Hugh Jean Mayfield, 62, of El Dorado died February 9, 1971.

Born in Union County in 1908, Dr. Mayfield began the practice of medicine in El Dorado in 1937 after having been graduated from Tulane University School of Medicine in 1935.

He was a member of the Union County Medical Society, the Arkansas Medical Society, and a former major in the United States Medical Corps.

Dr. Mayfield is survived by his wife, Mrs. Lucille Gorham Mayfield, and one son.

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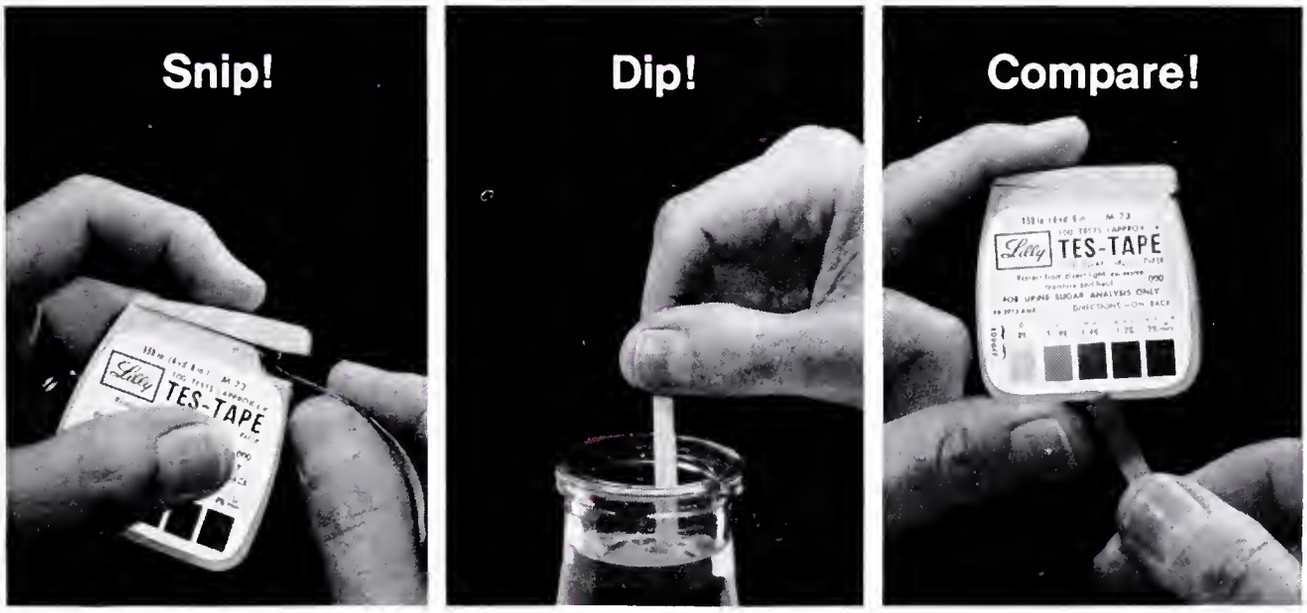
THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

Vol. 67 No. 12

FORT SMITH, ARKANSAS



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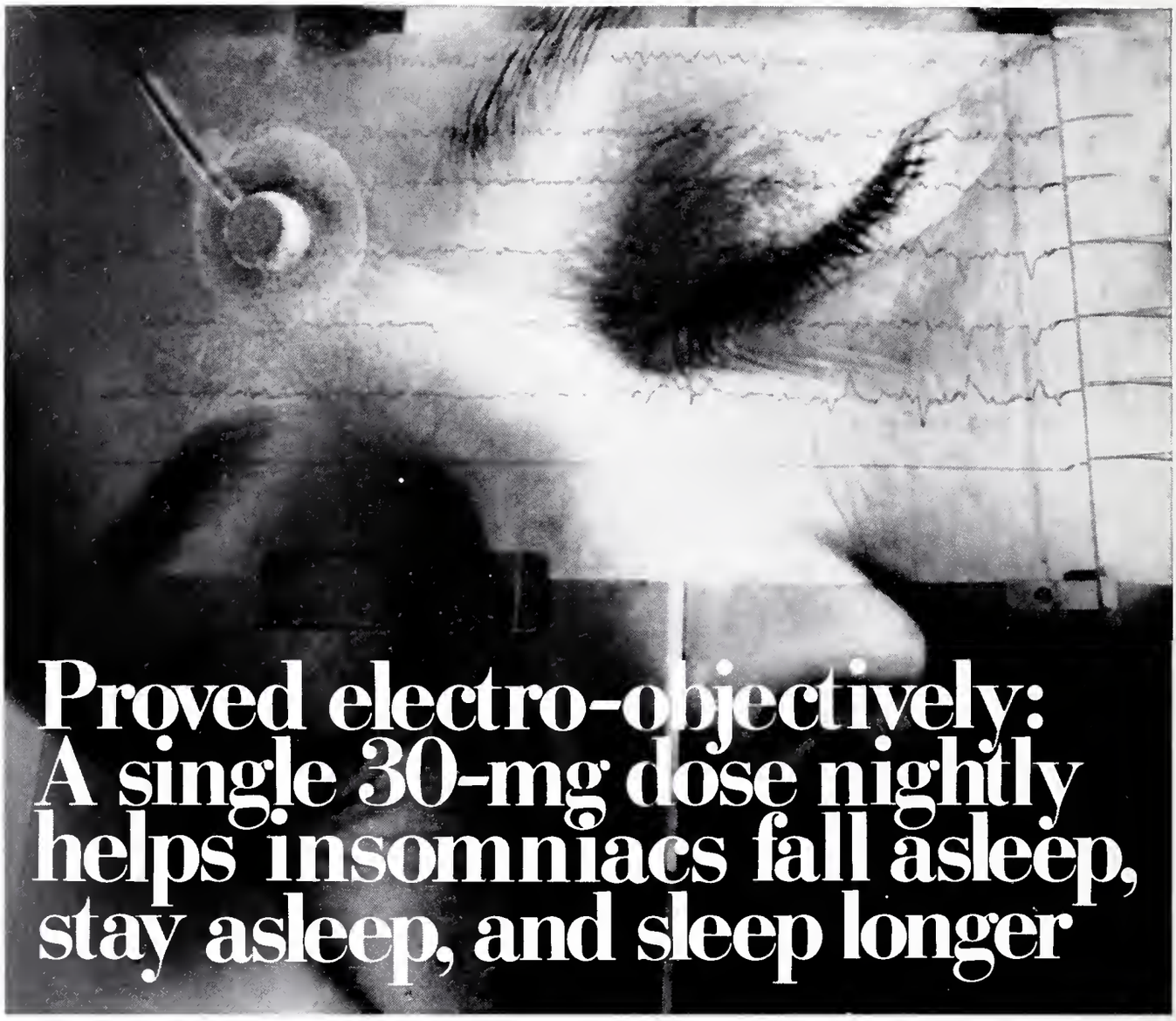

Proved electro-objectively: A single 30-mg dose nightly helps insomniacs fall asleep, stay asleep, and sleep longer

Controlled studies of 23 insomniac and 13 normal subjects treated with Dalmane (flurazepam HCl) in five sleep laboratories generated over 4000 hours of electroencephalographic, electro-oculographic and electromyographic tracings. These studies revealed that Dalmane 30 mg nightly usually induces sleep in 22 minutes and provides seven to eight hours of sleep.[1,2,3]

Moreover, Dalmane 30 mg was found to be useful in all common types of insomnia in which it was studied. Of drugs studied in a sleep laboratory,[1] Dalmane 30 mg was the only one that consistently reduced sleep induction time and maintained sleep nightly for 14 consecutive nights of use.

Confirmed clinically

Fifty-three controlled studies using a paired-night, double-blind crossover design have evaluated Dalmane clinically. In the majority of these, Dalmane (flurazepam HCl) significantly reduced sleep induction time and increased sleep duration. Dalmane and a placebo were alternated on successive nights in 2010 insomniacs, 1706 of whom were studied for a single night-pair, and the remainder for as many as fifteen paired-nights. A patient preference for Dalmane was apparent in the paired-night studies.

Dalmane was also preferred to certain hypnotics in two separate preference studies. In each of two double-blind studies, Dalmane 30 mg retained effectiveness for the total period of seven consecutive treatment nights, according to subjective/objective evaluations.

THE JOURNAL OF THE Arkansas MEDICAL SOCIETY

PUBLISHED MONTHLY UNDER DIRECTION OF COUNCIL

VOLUME 67 • MAY, 1971 • NUMBER 12

Tuberculosis Control in Arkansas—1970*

John A. Harrel, Jr., M.D.**

Tuberculosis continues to be a major problem in Arkansas and will unless a more adequate program is carried out. It is obvious to me that some changes must be made in our program in order to make it more effective.

The Communicable Disease Division of the Arkansas State Health Department at the present time is supervising approximately 4½ to 5 thousand cases of tuberculosis. In addition to these cases under supervision, there are approximately 32,000 cases on the tuberculosis register and 350,000 people in our state who have the tubercle bacillus in their body that could become reactiviated at any time. In 1969 we had 577 new cases and 48 deaths. Our new case rate has not gone down as we would like for it to.

NEW CASE RATE

YEAR	AREA		
	Alaska	Arkansas	United States
1959	161.8	39.3	32.5
1969	31.6	28.8	19.1

Our tuberculosis program in the health department at this time covers most of the state with one area receiving special attention. Our project in Pine Bluff has created national interest and attention: and Arkansas, for a change, is a leader in the field instead of being 48th or 50th on the list. We have 69 clinics in 61 of the 75 counties in Arkansas. There were 10,468 clinic visits in 1969. A tuberculosis clinic is held in each county at least once a month and in some of the more populated areas more often than this, often weekly. Some counties also have more than one clinic location. Patients are scheduled for visits by the public health nurse in the area in which the clinic is located. At each clinic the patient is seen by the nurse and by the visiting physician. X-rays are usually made on a contractual basis by some local hospital or private clinic although several clinics have their own equipment. Clinics are also equipped with nebulizers for use in the induction of sputum, and arrangements are made for the examination of this sputum by the State Laboratory within 24 hours. When the laboratory receives these sputums from each clinic, they are immediately processed including concentrated smear examination and cultures; and the results are reported to the physician. Drug sensitivity tests are also performed on these specimens, and the report is sent to the physician to aid him in selecting the proper drug regime for the patient. Great care is taken to correctly identify the organism and to determine whether the organisms are typical mycobacteria tuberculosis or the so-called atypical mycobacteria which are similar to and might be mistaken for tubercle bacilli.

ARKANSAS HYGIENIC LABORATORY
POSITIVE SPUTUM CULTURES
July 1, 1969 to March 1, 1970

	ISOLATES						
					Runyon		
		M. Tuberculosis	M. Kansasii	M. Fortuitum	Group II	Group III	Group IV
Total	816	444	16	14	244	97	1
Percent	100%	54%	2%	1.5%	30%	12%	.5%

Certain groups of these atypical organisms can and do cause pulmonary disease closely resembling tuberculosis; and these cases may require the same treatment as those with tuberculosis. Other groups of atypical organisms are relatively

*Presented at Arkansas Tuberculosis and Respiratory Disease Association's Annual Convention April 30, 1970.

**Director, Division of Communicable Diseases, Arkansas State Department of Health.

harmless and only rarely cause disease. Hence, it is obviously important that the typical and atypical organism be accurately identified and reported promptly to the physician so that he can take such therapeutic measures as may be indicated.

The casefinding program of the Tuberculosis Control Division is based primarily on the examination of referrals from private physicians, by examination of contacts to cases of tuberculosis, and by the examination of tuberculin reactors and their associates. The department operates a mobile x-ray unit which goes from county to county and takes films of those who have a positive reaction to the tuberculin skin test. The high risk groups examined to find new cases are:

1. Lifelong follow-up on inactive cases of tuberculosis and other individuals with positive PPD found to have a chest lesion.
2. Skin test and/or x-ray on general hospital admissions.
3. Skin test and/or x-ray on jail admissions.
4. Skin test and/or x-ray of persons at greater risks of becoming infected, i.e. medical personnel, individuals with chronic disease, pregnant women, etc.
5. Skin test and/or x-ray of persons at risk of infecting others.
   a. Annual examination for tuberculosis of all school teachers and other employees in schools.
   b. Other individuals in close contact with groups of children (baby sitters, Sunday school teachers, etc.)
   c. Midwives.
   d. Pregnant women.

Another service offered by our Division is consultant services on tuberculosis management to private physicians. The communication between the Division of Tuberculosis Control and the private physicians has been quite good, and there is very free communication between the practicing physicians and the health department.

Forty-seven physicians in private practice work as consultants to our chest clinics. The majority are internists and have had additional work in tuberculosis. At least once yearly we have an annual meeting of all the chest physicians in which we bring in a noted outside speaker. Case studies of difficult cases are presented and discussed at the state meeting each Friday at Pine Bluff and at the Special Referral Clinic held each Wednesday at Little Rock.

I am constantly amazed at the dedication of our local and district public health nurses to our tuberculosis program. There is no doubt in my mind that this group of nurses provides the basic core for our successful program. This dedication is manifested by the fact that many of the nurses go back to their offices on Saturday or Sunday or holidays in order to give injectible medication or frequently visit the homes on weekends and holidays in order to give injectible medications. This dedication certainly has an influence on the patient. Therefore, it contributes very much to the success of our program.

After reviewing our program, the missing link in our program in contrast to Alaska's is the emphasis on preventative treatment to reduce the risk of infection progressing into disease.

During the past five years there have been several studies made on how to establish a better tuberculosis control program in Arkansas. The first study that was made was done in 1966 by Dr. Carl H. Pfuetze who is General Administrator, Suburban Cook County Tuberculosis Sanatarium and Clinical Professor Medicine at the University of Illinois in Chicago, and by Dr. J. B. Stocklen, Controller of Chronic Illness and Tuberculosis for Cuyahoga County, the metropolitan area of Cleveland, Ohio. Their recommendations were: "That all phases of tuberculosis control conducted by the State of Arkansas, specifically the operation of the Division of Tuberculosis Control and the operation of the Arkansas Tuberculosis Sanatorium in Booneville, should be placed under the direction of the Arkansas State Board of Health. The Tuberculosis Control Division should continue to operate as at present. The administrator of the Arkansas Tuberculosis Sanatorium should become directly responsible to the State Director of Health. The Board of Trustees of the Arkansas Tuberculosis Sanatorium in Booneville should become the Sanatorium's Advisory Board to the Director of Health.

"The function of the Advisory Committee on Tuberculosis Control would be to assist the Director of Health in planning a re-organization of the tuberculosis control program along the lines mentioned in the report. Very importantly, it would be the responsibility of this committee

to assist the Board of Health in establishing a program which would insure the continuity of care of the patient and preserve those parts of the existing program which are useful.

"A 20 to 30 bed unit should be established at the University of Arkansas Medical Center as a diagnostic and treatment center for the tuberculosis. The University Medical Center has a highly qualified staff and could develop an excellent unit. Many patients, particularly those in the eastern part of the state, could be admitted initially to the University Medical Center, then transferred to the Sanatorium if needed. The University Medical Center should also provide medical services to all tuberculosis patients in Arkansas. The basic reason for this latter recommendation is the economy since the provision of special medical services on an occasional basis is quite expensive.

"The Division of Tuberculosis Control should also organize a unit for the care of tuberculosis patients of 20 to 30 beds in a general hospital, preferably not in the Little Rock area.

"The Division of Tuberculosis Control, as now constituted, should continue its present program; and the operation should be expanded to include more casefinding in high risk groups. An expansion of the clinic system should also be supported. Importance of the Tuberculosis Sanatorium as a tuberculosis control program will decline as the importance of the tuberculosis clinic increases. The State of Arkansas has developed an excellent system of tuberculosis clinics, and every effort should be made to support the program of the Division of Tuberculosis Control."

All of the above recommendations came from this report by Dr. Pfuetze and Dr. Stocklen.

The Health Planning Advisory Council in a meeting on November 19, 1968, made the following recommendations of the Study Committee for Arkansas Tuberculosis Sanatorium: "The Committee heard much testimony concerning the relationship between the State Health Department and the Sanatorium in Booneville. It is obvious that there is a need for closer coordination and cooperation between these two agencies. Most of the people interviewed, both professional and lay, felt that all state programs concerned with tuberculosis should be administered by a single agency for the best interest of the citizens of Arkansas. It is recommended that all state financed tuberculosis programs be under the administration of a single agency.

"This conforms to a previous study as recommended in 'Tuberculosis Control in Arkansas' by Dr. Carl H. Pfuetze and Dr. J. B. Stocklen.

"It is noted by the Committee that approximately 250 of the Sanatorium's 400 beds are now in use." (Now 180-200) "All experts estimate a continual decline in the number of prolong institutional tuberculosis beds because of the newer treatment methods and drugs. However, there will always be a need for approximately 100 beds for chronic patients needing long-term care. It is suggested that since there is a great need for institutional facilities in Arkansas for such problems as adult mental retardation, chronic emphysema, chronic or childhood mental illness, that the unused beds at the Sanatorium be utilized for other than tuberculosis patients.

"It was emphasized that these beds should not be used if the renovations would be too expensive. An agency should not be forced to use the beds just because they are there without taking into consideration the needs of the agency. The Council felt that the Sanatorium might be used for some other such service other than health. It is recommended that the Sanatorium be utilized for some other need; that a study be conducted by the Arkansas Planning Commission in cooperation with the Health Planning Program to determine what the greatest need is; and that recommendations be made as to how the conversion could best be accomplished and what remodeling, if any, would be necessary.

"The Committee visited Jefferson County Memorial Hospital and the State Sanatorium; and during the course of the study, expert medical testimony was presented that advocated short-term therapy and long-term therapy. At the present time, it is impossible for the Committee to critically evaluate one therapy against the other. The reasons for treating the patient in the general hospital — close to home — short stay, back to work early — are all excellent. However, the reasons for not treating in the general hospital — the need for long-term care, patients not following drug regime, the possibility of patient becoming infections — constantly concerns the Committee. However, all medical experts agree

that short-term therapy shows promise of success.

"It is recommended that the Jefferson County Memorial Hospital Project be supported by the legislature for two more years. It is recommended that after one more year a 'medical audit' by outside consultants be conducted on the program at Jefferson Memorial Hospital.

"Since the effectiveness of the Pine Bluff program will not be established until the medical audit is completed, the Committee is unable to recommend that treatment in general hospitals is a method that should be used in Arkansas. Although it appears that general hospital treatment is less expensive in the long run, there is some expense in establishing the program in these hospitals. It appears that it would be a questionable tax funded program until the effectiveness of the general hospital treatment concept has been established.

"It is recommended that no further general hospital projects be funded until the effectiveness of the Jefferson County Project is established by a 'medical audit'." This is the end of the report by the Advisory Committee.

The next few recommendations were taken from a medical audit evaluation report of the Tuberculosis Chemotherapy Program at Jefferson Hospital in Pine Bluff which was made by Dr. William Lester who is Chief of the Chest Medicine Service at National Jewish Hospital in Denver in December 1969.

"It is my firm conviction that this program represents a major demonstration of the effective delivery of medical care to patients combined with remarkable dedication on the part of all concerned; result being an amazing demonstration of the efficacy of modern chemotherapy in the treatment of tuberculosis today.

"The morale of the ward and the attitude of patients and staff toward each other was truly remarkable. One of the major contributions that this program has made lies in the fact that it represents a positive indoctrination of the patients for the acceptance of necessary medical care. Today, tragically, most tuberculosis institutions and programs are, in a sense, postgraduate schools in educating patients to avoid or evade necessary medical care. The impact on many patients entering a conventional tuberculosis hospital is often tragic and discourages their future cooperation. The close personal relationship that one sees between the patients, nurses, physicians, and para-medical personnel is an enormous asset to this program. The imprint of this positive experience in the hospital, I am certain, has significant contribution to the fact that the great majority of patients were being readily followed in the clinic. The sum total of this, of course, is that there is a much greater continuity of effective chemotherapy than one sees in more conventional programs. At the same time, this program represents, I believe, a major experiment in social medicine; it would be a wonderful thing if student nurses and medical students could have the opportunity to observe this program and see how it serves to improve the acceptance and understanding of patients in a public health program.

"I am quite sure that the cost of this program, involving no more than 500 patients who have been through the hospital aspect of it, is so low that it would stand in comparison with any figures throughout the world. Certainly, I know of no long-term hospitalization program available anywhere in the country that could approach the economy of this one. However, I believe a much more important fact is that all of the individuals concerned with this program by and large will be willing to cooperate with health authorities in the future and, in a sense, have been educated in how to use a modern medical facility. Since this represents one of the major needs of our society, I think this program should be recognized for what it has contributed to this solution.

"It must be pointed out that the need for continuity of this program is obvious, immediate, and enormous. This program is certainly serving the 12 county area to a degree that no other program presently available can match. If no other funds are available, it would certainly seem appropriate that the funds made available to the State Sanatorium Board could be reduced on a pro-rata basis to these 12 counties and used to fund this program. Certainly the ease with which these patients are being followed represents an enormous asset to this program and would not be reflected or would not occur if they had to be followed through the Sanatorium system which would be quite remote to them.

"From reviewing the charts and chest films of the patients in this series, I can assure you that

these patients are not less complicated or simple cases but are predominantly far advanced and represent as difficult treatment problems as one sees anywhere and are as typical of tuberculosis as we see it in this country today.

"I thought it was impressive that all of the patients that I saw in the clinics obviously liked the nurses and physicians and seemed to experience pleasure in visiting a clinic. This is a relatively unique experience in our society, and it is one that should be supported."

Dr. Lester's conclusions were:

"1. The program at Jefferson County Hospital in the 12 county area is excellent and must be supported.

2. Greater use should be made of the program as a teaching demonstration of delivery of good medical care. The design and efficiency of this program should be brought to the attention of public health physicians and administrators, nurses, social workers, and medical students.

3. If no other sources of funds can be found, the Jefferson Hospital Program should be supported by a pro-rata reduction in the budget of the State Sanatorium Board."

All three of these studies show conclusively without any hesitancy that it is most advantageous to the patient to be treated close to home in a local hospital; thereby, being near his family which contributes to his mental attitude and consequently benefits his medical treatment. In addition to being advantageous for the patient, it is also advantageous for the state of Arkansas to treat the patient in the local hospital because the hospital stay is usually short; and although the per day cost may be more, in the long run what matters is the total cost of rehabilitating the tubercular patient and returning him to a productive role in society.

The average hospital stay for a patient treated in Jefferson Hospital is 26 days. The average cost to the state is $946.24, while the average stay at the State Sanatorium is 202 days. The average cost to the state is $4,646.

Tuberculosis Control in Arkansas for 1970 should move forward to the point where we are returning the patient to a useful life in society as soon as possible and reducing the risk of infection from progressing into active disease by giving preventative treatment.

The changes that will be needed to bring this about are:

1. All tuberculosis control under one agency.
2. Chest clinics in the fourteen counties which have no chest clinic.
3. Local hospital in each section of the state where tuberculosis can be treated providing a happy atmosphere and the same cooperation between doctors, nurses, and patients that has been exhibited in our Pine Bluff Project.
4. Emphasis on the use of preventative treatment.

The challenge now is to keep the uninfected, uninfected.

Cardiac Replacement: Current Status of Cardiac Transplants and Protheses

D. A. Cooley et al (Texas Heart Institute, 6621 Fannin St, Houston 77025)

Ann Intern Med 73:667-681 (Nov) 1970

Twenty-one cardiac transplants were performed in 20 patients, including a second allografting in one case and a combined cardiopulmonary transplant in another. A two-stage approach to cardiac replacement was implemented, using an orthotopic total cardiac prothesis in a patient whose heart failed after cardiopulmonary bypass. For 64 hours the pump supported circulation until a donor heart was secured for transplantation. Function of all allografts was satisfactory and permitted several patients to resume normal activity, but long-term survival was usually prevented by rejection or infection, or both. Histocompatibility apparently influenced results. Six recipients lived five months or more, and one lived more than 16 months. None are alive today. Successful application of cardiac transplantation is hindered by immunologic problems and the inadequate supply of donors. In cases where a patient's heart fails during open heart surgery and no donor heart is immediately available, a two-stage approach to cardiac replacement may be appropriate, using a mechanical device for temporary cardiac substitution.

Prepaid Medical Group Practice — A Discussion

Linda Bilheimer

The rising costs of health care in the United States, together with the fact that there are many people who receive little or no medical treatment, are causing many people to challenge the traditional modes of health service delivery. It is widely believed that in order to utilize the nation's health resources more effectively, new methods of health service delivery must be developed. One such method that is currently being much discussed is prepaid medical group practice.

"Group practice" is in fact a somewhat misleading term, since it can refer to any formal organization of doctors who are working together. Thus a group practice may provide services in one specialty only. At the other extreme a comprehensive range of health services may be provided. It is with the latter type of group practice with which this paper will be primarily concerned.

There are several types of prepayment schemes in operation of which insurance is one. Under a regular health insurance plan consumers, through the medium of an insurance agency, pool their resources to protect themselves against unpredictable health expenses. The normal practice in the United States is for doctors to charge on a fee-for-service basis. After allowing for the necessary deductibles, individuals with insurance policies can claim back a certain proportion or all of these charges from their insurance companies. This is to be compared with the type of prepayment that is frequently associated with group practice. Under such schemes individuals contract directly with the medical group. They pay a fixed fee per annum and, in return, the medical group agrees to provide all necessary health services. It should be noted that by no means all group practices employ this "capitation", or fixed fee per person, type of prepayment scheme. Many of those in existence still charge on a fee-for-service basis.

Advantages and Disadvantages

It is argued that comprehensive group practice has some advantages for both patients and doctors. The consumer is able to receive nearly all necessary health services in one location from the same medical group. Consequently the latter will have a more complete knowledge of the patient's medical background and will probably have a better understanding of his health problems than the solo practitioner would have. Furthermore, a medical group can afford to purchase a more extensive range of equipment than can a solo practitioner and can also afford more supporting staff. A third advantage to group practice is that doctors work in close contact with their fellows who are readily available for advice and consultation. It has been postulated that working under the surveillance of their peers is an incentive to doctors to practice high quality medicine.[1]

Some persons charge that there is a disadvantage to group practice in that, in general, consumers are no longer free to choose their own physician. Patients receive treatment from any doctor in the group rather than from a single physician. Advocates of prepaid group practice reply that in most groups patients are able to make an informed choice of physician from the several that are available.[2]

As far as prepayment is concerned two main advantages are postulated. Firstly, it is maintained that doctors are more cost conscious when payment is made on a capitation basis. For, if subscribers to a group plan pay a fixed fee per annum and this is the sole source of income for the medical group, doctors' salaries are direct functions of the cost of the services provided.[3] Furthermose, as they are responsible for all aspects of the patient's health, it is not in the doctors' interest to provide low quality services. Inferior treatment could prove to be costly in the long run.

Cost consciousness extends further than merely looking for inexpensive ways to treat a sick patient. Doctors who are members of a prepaid group practice have a vested interest in keeping their clients well, since costs are directly related to sickness. Thus prepaid group practices tend to emphasize health maintenance as the doctors benefit from ensuring that their clients have regular physical examinations and adequate preventive care.

There is another aspect of prepaid group practice that deserves consideration. If the consumer has paid in advance for any type of health treatment that might be necessary should he become ill, he then has no financial reason for preferring one type of medical treatment to another. This is in contrast to many insurance schemes that are currently in operation. Most individuals that have some form of health insurance coverage, tend to insure against hospital inpatient treatment primarily and against outpatient treatment and other medical services to a lesser degree.[4] In other words people tend to insure against the most costly form of medical treatment, which is only to be expected. However, this can lead to a misutilization of resources. For, if they have the choice, people will probably opt for the type of treatment for which they have the most adequate insurance coverage. Thus it could be argued that most health insurance schemes encourage the use of the more costly methods of treatment.

Empirical Evidence

Case Studies

A valuable opportunity for studying the relative advantages and disadvantages of various types of health insurance plans is provided by the data collected on the Federal Employees Health Benefits Program. Federal employees are offered a choice of five different types of health coverage of which prepaid group practice is one. The group practices are dominated by the Kaiser Permanente Plan which operates on the West Coast, but also include the Group Health Cooperative of Puget Sound in Seattle and the Health Insurance Plan of Greater New York.

In June 1967 approximately 7,560,000 Federal employees were covered by the Health Benefits Program. Since the program has been in effect since 1960 data are now available for several years. Based on this data a series of studies concerning premiums, benefits and hospital utilization rates has been undertaken.[5] Some of the results of these studies will be discussed briefly below.

It appears that, in general, persons enrolled in group practice plans and in individual practice plans[6] experienced lower hospitalization rates than did persons enrolled in regular insurance plans.[7] (Hospitalization rates refer to total inpatient hospital days per thousand covered persons.) Lower hospitalization rates experienced under prepaid group practice were apparently attributable to relatively fewer persons receiving inpatient treatment, whereas the lower rates experienced under individual practice plans were apparently due to shorter hospital stays.[8] Conversely, the individual and group practice plans had many more utilizers of outpatient services per thousand covered persons than did the other plans.

Thus the available evidence tends to support the hypothesis that prepaid group practice plans attempt to reduce the number of persons requiring hospitalization. However, this does not necessarily imply that they are either less costly or more efficient than other plans. Nor does it indicate anything about the relative standards of health care received under different plans. All these issues need to be examined.

Relative Efficiency

It is tempting to assume that working in a group practice increases doctors' efficiency since they have access to more equipment and can afford more supporting personnel. A study that has been done on this subject does not support this hypothesis.

A comparative study of efficiency among solo practice internists and fee-for-service group practice internists in the San Francisco Bay area was undertaken in 1967.[9] Defining efficiency as output per manhour, the study concluded that there was little evidence that the large multispecialty group practices had any real comparative advantage over the smaller scale practices.

Clearly much more research needs to be done on this topic, especially in relation to rural group practice. For it may well be that there is little relative advantage for group practices in urban areas in which all medical facilities are in abundant supply. However, in rural areas in which all types of medical personnel and facilities are scarce, a group practice that can afford to purchase equipment and support more ancillary personnel may well have an advantage over solo practice.

Comparative Costs

Consumers themselves are concerned with three main issues — the quantity and the quality of the medical care that they receive and the amount that they have to pay for it.

Detailed information about premiums is available for those programs that are included in the Federal Employees Health Benefits Program.[10]

Premiums and deductibles for different programs are not directly comparable since the price of health services varies considerably in different parts of the United States.[11] Disregarding price differentials, however, it does not seem possible to generalize about group practice premiums in relation to other health insurance premiums. In some cases they are higher and in some cases lower. It is worth noting though that group practice enrollees have to pay small or nonexistent fees for office or clinic visits. These are to be compared to the relatively high deductibles that Blue Cross-Blue Shield and Aetna enrollees have to pay.[12] Thus is would appear that regular physical checkups present no financial hardships for group practice enrollees, nor do visits to the doctor for minor ailments.

Quality of Care

It is difficult to assess differences in the quality of care received by patients enrolled in different health insurance schemes. However, data are available on the dollar value of benefits received in each program. Because of their emphasis on inpatient hospital treatment, Blue Cross-Blue Shield, Indemnity and Employee Organizations had high benefits per person receiving benefits. In terms of the total number of persons enrolled in the program though, the group practice plans had the highest benefits per person.

It appears that the proportion of persons enrolled in individual and group practice plans who received benefits were far greater than the corresponding proportions in the other three programs. One cannot conclude from this, however, that persons enrolled in group plans were healthier as a result of the care received than persons enrolled in other plans. For example there is a serious question as to whether subscribers suffered or benefited as a result of the reduced surgery rates experienced in group practice.[14] Advocates of prepaid group practice would probably phrase the question another way. Were all the surgical procedures that took place under other forms of health insurance really necessary? This is a question that only the medical profession can answer.

Relation to Medicare - Medicaid

Under the present laws there are severe fiscal problems to incorporating Medicare patients into a prepaid group practice system. This is because Medicare legislation prohibits the use of a capitation method of payment for medical care. Thus reimbursement of prepaid group practices still takes place on a fee-for-service basis and, consequently, cost reduction incentives are largely lacking. Furthermore, a great deal of extra administrative work on the part of the group practices is necessitated.[15]

This issue has been noted specifically in the Social Security Omnibus Bill of 1970.[16] In this Bill it is proposed that persons eligible for both Part A and Part B of Medicare should be given the option of receiving services from a health maintenance organization. The Government would pay, on a capitation basis, up to 95% of the cost of the Medicare benefits that the beneficiaries would have received had they not been enrolled in a health maintenance organization.[17] Furthermore, the House Ways and Means Committee Report on the Bill maintains that there is nothing to prevent states from arranging Medicaid coverage through health maintenance organizations.[18]

If the Bill is passed, it would come into effect in January 1971 and the way would be cleared to allow capitation payments to prepaid group practices for Medicaid and Medicare patients.

Rural Group Practices

It would be invaluable for a rural state such as Arkansas, when examining the possibilities of developing prepaid group practices, to be able to call upon the experiences of the rural group practices already in existence. Unfortunately there is very little documented information available about these and it has not proved easy to obtain information from the clinics themselves.

It appears that existing rural group practices operate predominantly on a fee-for-service basis and provide services over a wide geographical area. They all acknowledge difficulties in attracting physicians to work in rural areas. Some clinics, however, have apparently overcome this problem, because doctors often appear to enjoy working in a well planned organization with ready access to medical equipment and other medical personnel. Some clinics attempt to attract doctors by providing all types of fringe benefits.

In general little further information is available about these clinics. Thus there is no way

of evaluating the services that they are providing in their respective areas.

There is, however, an exception to this. The Southern Monterey County Medical Group in King City, California has attempted to provide fairly detailed information about its activities.[19] The King City project involved a group practice of seven physicians who, in 1967, secured an O. E. O. grant to provide medical services to the Mexican American farm laborers of the Salinas Valley. So far 90% of the poor that it was hoped to reach have been registered.[20] Data are available concerning the treatment of project patients for the two operational years July 1967-July 1968 and July 1968-July 1969.[22] The data reveal that of a target population of nearly 8,000 approximately 50% received treatment during 1968/69. Furthermore, this involved, on average, nearly five encounters per patient. One would probably find a similar high case load among any population with a backlog of untreated ailments. Total costs per patient per year, as well as inpatient costs per patient per year, fell in 1968/69 from the levels of 1967/68.[23] However, not very much can be concluded from this. Data are needed for several years in order to see if any trends are present, especially since it has been suggested that hospital admissions may be high in the first few years of providing comprehensive health services to a population that has received little medical treatment in the past.[24]

An issue that needs to be examined when considering prepaid rural group practices relates to the necessary size of such practices. Does a prepaid medical group have to have a certain minimum number of doctors and patients in order to be self supporting and to be able to bear the risks associated with being responsible for all aspects of a patients health? If such minima do exist do they vary between urban and rural locations?

This is a complex issue. It might be argued that, at a minimum level of operation, a rural prepaid group practice would have to be more comprehensive than would an urban prepaid group. For, the further away a medical group is from other medical services, the more costly it is to contract with other medical practitioners to provide those services not available within the group. On the other hand many rural areas have few doctors, particularly specialists. If they do not have the resources to attract more doctors, could a more efficient utilization of resources still result if the solo practitioners covering a large rural area combined together to form a medical group? One is tempted to say yes, though much would depend on the terrain and the availability of transportation. However, whether it would be possible financially for such a group to operate on a prepaid basis is open to question. Some other forms of health insurance would probably also be necessary.

Another financial problem to be faced by rural prepaid group practices would be found in areas in which a large majority of the population is poor. As was mentioned above, a large backlog of untreated disease would mean that costs would probably be high in the first few years of operation. It might be extremely difficult to operate a prepaid group practice and keep premiums at a reasonable level unless some form of government assistance was available.

If it is thought desirable to encourage the formation of rural prepaid group practices, clearly much more thought needs to be given to the associated financial problems.

Conclusion

There is a growing tide of opinion that the American medical profession should be moving towards the development of more prepaid group practices. Progress is being made in overcoming some of the associated problems, but there are still several unanswered questions. Some of these have been discussed in this paper.

No doubt one could raise endless questions like those above and there would be few satisfactory answers. Probably most of the answers will come only through experience. However, they are all issues that need to be given much consideration. There is a danger of believing that prepaid medical group practice is, per se, a panacea for all current health problems, without recognizing that it too has some problems of its own.

NOTES

1. Edmund K. Faltermeyer, "Better Care at Less Cost Without Miracles," *Fortune*, January 1970, p. 83.
2. Ibid.; and W. Palmer Dearing, M.D., *Developments and Accomplishments of Comprehensive Group Practice Prepayment Programs* (Washington, D.C.: Group Health Association of America, Inc., rev. ed., January 1970.)
3. As long as the demand for doctors' services is not completely inelastic, (i.e. as long as the quantity de-

manded is not completely non-responsive to price), all doctors have some incentive to keep down costs. However, it is argued that this incentive is strongest when prepayment schemes are utilized. For a detailed discussion of cost reduction incentives under the Kaiser plan see: *Report of the National Advisory Committee on Health Manpower*, Vol. II (November 1967), pp. 197-228.

4. Faltermeyer, op. cit., p. 81. (Faltermeyer maintains that at the present time about 85% of Americans under 65 have some hospitalization insurance and 78% are covered for surgeons' fees. However, only 51% of the population has any sort of coverage for X-rays and laboratory tests outside the hospital and only 40% have coverage for visits to doctors' offices.)
5. George S. Perrott and Jean C. Chase, "The Federal Employees Health Benefits Program," *Group Health and Welfare News*, Special Supplement, October 1968.
6. Individual practice plans are comprehensive plans operating on a fee-for-service basis, with services being provided by doctors in the community.
7. The other insurance plans are Blue Cross-Blue Shield, Indemnity Benefit Plan and Employee Organization Plans.
8. Dearing, (op. cit., pp. 18-23), gives details of several studies that compare hospital utilization rates under prepaid group practice, Blue Cross-Blue Shield and commercial insurance. All studies except two support Perrott and Chase results. The two exceptions found no difference in hospital utilization rates between prepaid group practice and other forms of health insurance. It is interesting to note, however, that in both these instances utilization rates were low.
9. Richard M. Bailey, "A Comparison of Internists in Solo and Fee-For-Service Group Practice in the San Francisco Bay Area," *Bulletin of the New York Academy of Medicine* 44 (November 1968), pp. 1293-1303.
10. Dearing, op. cit., p. 12.
11. For a comparison of hospital expenses per patient day in different States see: *State Data and State Rankings in Health, Education, and Welfare* (Washington, D.C.: U.S. Department of Health, Education, and Welfare, U.S. Govt. Printing Office, 1966-67), p. 13.
12. In the high option versions of these plans Blue Cross-Blue Shield enrollees are required to pay the first $100 of physicians' bills beyond basic benefits + 20% thereafter. Aetna enrollees are required to pay the first $50 of medical bills, (25% if hospital deductible is used), + 20% thereafter.
13. Perrott and Chase, op. cit., p.i.
14. Ibid., p. viii.
15. Example: Robert J. Erikson, "The Impact of Medicare on a Group Practice Prepayment Plan," *Bulletin of the New York Academy of Medicine* 44 (November 1968), p. 1317.
16. H.R. 17550.
17. Social Security Amendments of 1970, *Report of the Committee on Ways and Means on H.R. 17550* (Washington, D.C.: U.S. Govt. Printing Office, 1970), p. 6.
18. Ibid., p. 54.
19. L. H. Andrus, "The Private Physician — Overcoming the Health Manpower Shortage," *Bulletin of the American College of Physicians* 10 (August 1969), pp. 381-384; "King City — Care in a Rural Setting," *Journal of the American Medical Association* 211 (March 1970), pp. 1951-1953; L. H. Andrus, "Home Care For the Rural Poor," *Hospitals* 44 (March 1970), pp. 43-48; American Medical Association, *Health Care Delivery in Rural Areas, Selected Models* (September 1969), p. 9.
20. It is notable, however, that 70% of the persons served by the group are private, fee-paying patients. Services to the indigent are free of charge and are funded by the O.E.O. grant.
21. Project patients are those covered by the O.E.O. grant.
22. *Cost Factors in O.E.O. Comprehensive Health Centers* (Washington, D.C.: O.E.O., Office of Health Affairs, unpublished data).
23. Total costs per patient per year fell from approximately $210 to $179. Inpatient costs per patient per year fell from approximately $71 to $52.
24. Dearing, op. cit., p. 22.

Pancreatic Function and Intestinal Absorption in Chronic Alcoholism

E. Mezey et al (Baltimore City Hosp, Baltimore 21224)

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Pancreatic function, small intestine absorption, and morphology were investigated in 37 male chronic alcoholic patients without liver cirrhosis and with no overt clinical evidence of malabsorption or malnutrition. Pancreatic response to secretion stimulation was abnormal in 44% and steatorrhea was present in 35% of the patients. Although the histologic appearance of the jejunal mucosa was normal in all of the patients, *d*-xylose malabsorption was found in 24%. Most of these abnormalities reverted to normal when an adequate diet was instituted with or without continuation of alcohol, and alcohol had no detrimental effect on normal pancreatic functioning when given with a normal diet. Subclinical protein malnutrition is an underlying cause of malabsorption in chronic alcoholic patients.

Thromboembolism in Orthopedics

Jack Stevens, M.D.*

Interest in the total problem of thromboembolism has recently been heightened by rather rapid advances in methods of treatment and diagnosis and there exists, at present, a considerable controversy over the value of prophylaxis for this menacing disorder.

In order to place the available facts in their proper perspective, we may do well to review several aspects of the thromboembolic complex. These include:

Thrombosis:	cause and course
	incidence
	diagnosis
	treatment
Embolism:	incidence
	diagnosis
	treatment

Thrombosis — Cause and Course

Over a hundred years ago, in 1856 to be exact, Virchow proposed his now-eponymous triad of intimal damage, decreased flow and increased coagulability as the principal precursors of postoperative thrombosis of the leg veins. And we have really added very little substantiated knowledge since then. The number and variety of causes underlying each member of the triad continue to be elucicated but the whole picture is far from clear.

Decrease in venous flow is known to follow many central and peripheral changes, important among which are elevated central venous pressure, compression of the limb from without by inappropriate bandages and of the veins within the leg by hematoma. Immobilization of a limb excludes the normal pumping action of muscles, which itself can only act in the presence of functioning venous valves, and the same can be said of the pernicious habit of getting patients out of bed early after operation to sit, with dependent legs, in a wheel-chair.

Intimal damage has perforce to be assumed rather than positively identified since it can only be defined by pathological examination, by which time it cannot be clearly ascertained whether it perhaps preceded or followed thrombosis. But it is not difficult to visualize that previously damaged and fibrosed valves may nucleate thrombosis in an area of abnormal eddy currents.

Increased blood coagulability may depend upon many things. Change in the viscosity with hemoconcentration in the dehydrated state may affect flow properties as well as coagulability, and alterations in the all-important platelets have recently received much attention. There are well recognized difficulties in studying platelet stickiness but more and more evidence is being adduced to support the idea that this property is enhanced after accidental or operative injury. It must also be said, however, that there are some reports to the contrary. We are left, then, with the same three prime causative factors that Virchow enunciated.

What of predisposing factors? Obesity and senility are likely causes of immobility and like heart disease, may cause decreased flow. Injury or surgery makes a double contribution through immobilization and alteration in the platelets, and a third possibility is compression from hematoma formation within a closed fascial sheath envelope. Previous vein disorder has already been incriminated and the well recognized but poorly understood association of predisposition to thrombosis with intra-abdominal malignant disease deserves to be mentioned. The evidence for abnormally high incidence of thrombosis in women taking contraceptive pills becomes increasingly convincing.

The natural history of the development and fate of a non-inflammatory venous thrombus has been adequately studied. At the site of intimal damage there forms a small conglomeration of platelets. The addition of further platelets and their hyaline degeneration produces the so-called "Corallin" thrombus upon which are deposited, by chemical, mechanical and chemotactic means, fibrin and red cells. This nucleated thrombus then grows to block the vein and even more rapidly develops a long, free-lying tail of propagated clot.

Any thrombus remaining *in situ*, that is, not fractured off and launched into the circulation

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as an embolus, is subjected to beginning organization within a week. This starts at the edge of the clot and combines with centrifugal liquefaction to produce recanalization, a slow process hastened by anti-coagulants and necessarily accompanied by destruction and distortion of the delicate valves.

The incompetent venous system causes peripheral stagnant anoxia and the well known sequelae of chronic edema, varicosities, eczema and ulceration are likely to occur. Subjectively, the characteristic bursting pain is particularly troublesome.

Considering only the lower extremities, the sites of primary thrombosis have been well established in order of frequency. Commonest are the deep calf veins, next the ilio-femoral and foot veins and finally the iliac veins and the vena cava. Localized superficial thrombophlebitis is well known and less important than deep vein involvement which may be localized at one or more sites, extensive or massive.

Thrombosis — Incidence

The prevalence of venous thrombosis has been demonstrated to be far higher than our deceptive clinical impressions would suggest. The chief ways of evaluating incidence comprise clinical studies, special examinations and detailed autopsy dissections.

Thrombosis — Diagnosis

The cardinal fact to accept about clinical diagnosis of venous thrombosis in the legs is that physical signs are absent in half the subjects. A real awareness of its possible existence may prompt one to search diligently for such symptoms and signs as calf pain and swelling, a preliminary spike of fever, dilated superficial veins, deep tenderness and increased muscle turgor. Homan's sign is the best known and least reliable indicator.

In the group of patients most susceptible to this disorder, namely, elderly subjects with femoral neck fracture, the reported clinical incidence is between 15 and 30 percent.

A small number of special examinations is available. Venography has been tried for nearly 50 years and a reliable technique has recently been established. Its complications are very few and it is believed not to initiate or cause extension of thrombosis. In hip fracture patients, an incidence of 40 percent has been reported and confirmed and the correlation with clinical symptoms and signs is very poor indeed. The major disadvantage of venography is, of course, that it is unsuitable for repeated daily use.

This objection has been nearly overcome by the use of isotope sequestration. Fibrinogen (or an antibody prepared against it) is labelled with radioactive iodine and will persist in the circulation in sufficient amounts for detection for about 10 days after injection. Any forming thrombus will incorporate the radioactive tracer in high concentration and this may be demonstrated at the bedside by scanning with a portable scintillation counter. The results of this technique correlate extremely well with the more objective venography. It is simple, safe, reliable and can be employed for longer than 10 days by repeating the injection. Some interesting facts have come to light from the extensive use of this isotope sequestration technique. Thus, thrombi have been seen to form as the patient lies on the operating table although the average interval between operation and thrombosis is 3 to 4 days. It can also be employed, of course, to show the effects of therapy.

Two experimental and currently unestablished diagnostic tools deserve mention. Thermography commonly shows local increase in skin temperature at the site of thrombosis as well as less marked hyperthermia of the whole limb. It is a somewhat cumbersome if entirely benign examination. Ultrasonic wave distortion by venous blood flow, depending upon the Doppler effect, has shown promise in detecting occlusion. It is eminently simple in practical use but has yet to become an established clinical method.

Thrombosis — Treatment

The treatment of thrombosis is dictated in large part by the fallibility of clinical diagnosis. Because of this and because of its deadly potential, many surgeons believe that prophylaxis is in order. The alternative approach is to employ specific therapy for established thrombosis.

Prophylactic use of anticoagulants has merit in that many reports indicate that its use in selected patients has cut the mortality rate to one-fifth. Those who advocate this approach point to this fact as well as the difficulty in diagnosing not only deep vein thrombosis but also pulmonary embolism, and they regard it as being safe. Those opposed to its use regard the complica-

tions of prophylactic anticoagulation as being considerable. These include the hazard of bleeding, the increased incidence of post-operative sepsis and the need for very careful control. There may also be masking of clinical signs of thrombosis evident on venography.

This controversy has yet to be satisfactorily settled but it may be significant that those who use anticoagulants number many less than those who do not.

Prophylaxis for deep vein thrombosis is by no means confined to anticoagulation and we tend to overlook the simpler proven methods available. These include leg exercise programs, elastic supports, foot elevation (avoiding leg dangling in the urge to have the patient out of bed early after an operation) and early walking. We might also give thought to the provision of better padding on operating tables, wheel-chairs and carts. All of these simple measures have been shown to have significant benefit after operations on elderly subjects.

By the term "specific treatment" is implied incident-dictated therapy only. This demands the sort of accurate diagnostic facilities which may not be too futuristic when the isotope sequestration method is considered. It may be that leg scanning will become a matter of regular recording along with temperature, pulse, respiration and blood pressure in appropriate patients. With the diagnosis confidently made, treatment may then proceed using heparin, coumadins, phenindione, snake venoms and perhaps dextrans. These have the property of preventing clot extension, decreasing the incidence and severity of pulmonary embolism and decreasing the clinical (but not the true) incidence of thrombosis.

Anticoagulants may limit thrombosis and help to prevent embolism. The recently developed thrombolytics, on the other hand, can produce rapid and complete dissolution of recent leg vein thrombi. Streptokinase (from bacterial cultures) and urokinase (a normal constituent of urine) are both being tried and found successful. Both are difficult to prepare and therefore of limited availability and high cost. Streptokinase is antigenic and both enzymes have the disadvantages of producing rebound thrombosis and bleeding on occasion. Here is a therapeutic method ripe for development and widespread testing before being put into routine use.

Surgical treatment for established deep vein thrombosis has varied enormously in popularity. Time was when femoral vein ligation was practiced routinely. At the other extreme, some surgeons are not convinced of the value of operation in any circumstances. At the present time this particular pendulum appears to be in about "mid-swing" with particular and well-recognized indications. These include demonstration of thrombosis and/or embolism, and failure to control clot extension and embolism with anticoagulants or thrombolytics. If the level of the clot in the leg can be demonstrated with certainty, then choice may be made as to the level of vein ligation. At high levels, thrombectomy and inferior vena cava plication have given good results although neither procedure is totally effective and free of complications.

Embolism — Incidence

The exact incidence of pulmonary embolism in any group of patients (except for those who die and come to autopsy) is difficult to establish. Significant emboli are found in 10 percent of all patients dying in hospital and in 50 per cent of persons dying from injury. Other facts which have come to light are.

1. The incidence is highest in patients with hip fractures.
2. Embolism does not occur in the absence of peripheral thrombosis.
3. At least half of all emboli are "silent" in patients with no clinical evidence of thrombosis.
4. One-fifth to one-third of patients with thrombosis will have embolism.
5. One-fifth to one-third of these will be fatal.
6. In the elderly injured, pulmonary embolism is the commonest single cause of death.

Embolism — Diagnosis

The clinical diagnosis of sub-major pulmonary embolism is no less difficult than that of the preceding leg vein thrombosis. Breathlessness, pain and collapse are fairly common features whereas cough, hemoptysis and a friction rub are less common. Other symptoms and signs include tachycardia, cyanosis, hypotension and a raised central venous pressure. If reliance is to be placed on these symptoms and signs, then therapy, of a non-surgical type, must often be started on suspicion alone.

Of the special tests available, radiography of the chest and electrocardiography require fairly large infarction before significant changes may be detected.

The use of technetium-labelled albumin as a circulatory system tracer for scanning the lung with a scintillation counter is a rather imprecise test. It has been found to be suggestive in 50 percent, exclusive in 25 percent and unhelpful in 25 percent. In the urgently affected patient its value is highly doubtful.

Before considering surgical treatment, pulmonary arteriography is essential since it is absolutely accurate as a diagnostic tool.

Embolism — Treatment

Changes are occurring in the therapeutic approach to pulmonary embolism, depending upon its extent and the state of the patient.

A massive acute embolus which blocks more than one-half of the major arterial branches kills 75 percent of the patients within 2 hours. Embolectomy (perhaps with hyperbaric oxygen support) might save half of these. The same operation will be uniformly fatal if the patient's myocardial infarct has been mistakenly diagnosed. If surgery is contemplated, it is better done by an experienced team with access to cardio-pulmonary by-pass.

Instead of thinking first of surgery, these patients might do better with fibrinolysis. A 36-hour infusion through the same cardiac catheter used for the angiogram has given dramatic results if started early enough. There have been reports of return to complete angiographic normality within 3 days. Heparin, on the other hand, does little to reverse the changes but it may inhibit extension of the clotting within the lungs.

A less massive event kills perhaps 10 percent of subjects and those who survive are at risk of another embolus. These may best be treated by heparin or fibrinolysis.

For recurrent minor emboli, fibrinolytics or anticoagulants may be continued and supplemented by appropriate vein ligation as directed by venographic findings. The problem of bilateral silent thrombosis and embolism remains as a major difficulty.

Summary

Venous thrombosis is common, especially after trauma about the hip. It is difficult to diagnose clinically and variable in extent. Certain diagnosis may be made by venography or an isotope technique and treatment may then be by specific measures instead of prophylaxis.

Pulmonary embolism is a serious complication in about one-third of patients with thrombosis and it also is difficult to diagnose clinically. Suspected small emboli may be treated with anticoagulants or perhaps fibrinolytics, whereas major emboli must be diagnosed with certainty by arteriography before considering the heroic sort of surgery which is required.

It seems likely that the future trend will be towards regular scanning for bedside diagnosis of thrombosis and the use of fibrinolytics as the primary treatment method for both thrombosis and embolism.

Primary Amebic Meningoencephalitis in Britain

J. Appley et al (Children's Hosp, Bristol, England)

Brit Med J 1:596-599 (March 7) 1970

Meningoencephalitis due to ameba was diagnosed in Great Britain for the first time. A 2-year-old boy had sore throat and headache for seven days and then developed severe meningitis. Two days later *Naegleria* was seen in and cultured from the cerebrospinal fluid. On the first day of meningitis the child stopped breathing and was kept alive on a respirator for 15 days, thus living longer than in previously recorded cases. He was treated with intravenous amphotericin B which was found at autopsy to have cleared the *Naegleria* from the brain. Two days before the onset of prodromal symptoms he had splashed in a muddy puddle; two other children who splashed in the same puddle had similar prodromal symptoms and developed mild meningitis. *Naegleria,* not considered to be a laboratory contaminant, was isolated from the cerebrospinal fluid of one of the patients, both of whom recovered after treatment with amphotericin B.

Arkansas State Meat Inspection Now "Equal to Federal"

As Conducted By

The Arkansas State Department of Health

The Arkansas State Meat Inspection Program was initiated following the enactment of the Arkansas Meat and Meat Products Inspection Act, Act 320, February 1967. The Federal Wholesome Meat Act was passed by the U. S. Congress early in December, and was signed into law by President Johnson on December 15, 1967. Both laws provide for mandatory inspection of all meats entering human food channels.

The function of the Arkansas State Meat Inspection Program is to provide consumers of meat and meat food products health protection from the many diseases of animals transmissible to man by the eating of meat and meat food products which may otherwise have come from diseased animals or animal products which have been contaminated and/or adulterated while being processed, stored, and/or transported under unsanitary or harmful conditions.

The Meat Inspection Program is carried out by placing technically trained personnel in all non-federally inspected slaughtering and meat processing plants in the State. Inspectors are taught to recognize the difference between a sick and a healthy animal, thus preventing the slaughter of any sick or diseased animal for use as human food. Inspectors are additionally taught to distinguish the difference between diseased and healthy tissue so they can perform post-mortem screening inspections of each and every carcass of livestock slaughtered for human food. They also conduct complete and continuous inspection supervision over the manufacturing and processing of all meat and meat food products capable of use as human food, to assure that products do not become contaminated through mishandling, or become adulterated by excessive amounts of permissible additives or by any non-approved (dangerous) additives; that all products are truthfully and properly labeled so as to avoid deceiving the purchaser or consumer. All inspectors are continuously supervised by graduate veterinarians who are specially trained in meat inspection, in order to provide proper interpretation of the requirements of Arkansas State regulations which are equal in all technical aspects to those governing the Federal Meat Inspection Program.

The application of the Meat Inspection Program involves all persons, firms, and/or corporations (not under federal inspection) which slaughter livestock and process meat therefrom capable of use as human food, who offer it for sale directly or indirectly to the consuming public. It involves additionally those persons, firms, or corporations engaged in custom slaughtering and processing for individuals on a fee basis in an establishment which is "open to the public" and other persons, firms or corporations which may be engaged in the storage and/or transportation of meat and meat food products within Arkansas. Also involved are pet food manufacturing firms, renderers, and all other firms who may in any way be engaged in the handling, processing, storage, transportation or sale of meat or meat products derived from "4-D" animals, which are livestock that is known to be or may have been either diseased, distressed, dying or dead prior to being slaughtered, in order that such product will be prevented from entering human food channels.

Specifically, the Arkansas State Meat Inspection Program:

A. Provides for the Consumer:

(1) Health protection inspection of meat and meat products throughout the State of Arkansas to insure the sanitation, wholesomeness, and identification of all meat and meat food products being legally sold within the State of Arkansas.

(2) An acceptable degree of sanitation for persons patronizing "exempted" custom slaughtering and processing plants.

(3) A continuous "truth in labeling" assurance for all meats and meat products being offered for sale as human food.

(4) Indirectly by making available to user organizations such as restaurant associations, retail store associations, school lunch program officials, hospital officials, nursing home officials, and other state, county, or municipal using organizations, up-to-date listing of slaughtering and meat processing plants which are under full-time inspection for wholesomeness by both State and Federal inspection agencies within the State of Arkansas.

(5) A laboratory analysis service for the sampling and testing of routine and/or selected special samples of meat and meat food products to insure that regulation requirements for limitations are met for water, fat, and permissible added ingredient content; for the presence of injurious or harmful chemicals or other contaminants, such as foreign matter, dirt, filth, drug residues, insecticide, pesticide, or herbicide residues, injurious radioactive materials and/or other substances which might be immediately or accumulatively injurious to the health of man.

(6) Effective surveillance to control the proper disposition of all diseased, disabled, dying and dead (4-D) animals to insure non-entry of any meat from these sources into human food channels.

B. Provides for the Meat Industry:

(1) Plans, blueprints, and labeling approval service for all meat packers, slaughterers and processors, and freezer locker operators.

(2) A no-cost consultation service for persons, firms, or corporations contemplating entry into, or the expansion of meat and meat food product manufacturing operations from a wholesomeness, sanitation, and food technology standpoint.

(3) Actual performance data on individual slaughtering and processing establishments when requested by the Small Business Administration, banks, and/or other lending institutions.

(4) Advice and data on all meat processing equipment approvable under requirements of the Arkansas Rules and Regulations pertaining to the Meat and Meat Products Inspection Act.

(5) Operating under official licensure of the Arkansas State Program a current list of authorized chemical compounds and other agents for use in their establishments.

C. Provides for itself:

(1) Regulation and educational material to veterinary practitioners who participate in the State Meat Inspection Program as paid "finaling" consultants.

(2) The orientation and coordination of the training of all new employees of the Arkansas Meat Inspection Program.

(3) A continuing education and refresher training curriculum and program for State Meat Inspectors and Veterinary Practitioner Participants of the State Meat Inspection Program.

Requests for information and assistance may be made in person or by writing or telephoning the Division of Meat Inspection, Arkansas State Department of Health, 4815 W. Markham Street, Little Rock, Arkansas 72201.

Telephone:
501-661-2264 — Director
2292 — Assistant Director
2295 — Labeling and Blueprint Section
District Supervisors:
501-661-2224 — Southeast District
2225 — Southwest District
2227 — North Central District
501-782-4412 — Northwest District
501-935-9114 — Northeast District

EDITORIAL

The Voluntary Approach*

Ben N. Saltzman, M.D.**

I am a physician in the private practice of medicine. As such for many years, although protesting violently, I have watched the practice of medicine in our country become more and more regulated by federal directive. I am not going to waste your time presenting a diatribe against socialized medicine. I know that you tire hearing of it, and I am tired of talking about it. However, I am watching another occurrence that is closely related to the same problem. More and more people are saying, "Let George do it," and because you say so, "George" is beginning to do it. You, the citizens of this great country, are voluntarily giving up your rights. As citizens of a great democracy, your chief perogative is voluntarism. You have reserved the right to do what you think best for your fellow man. You have followed the golden rule in asking that he do likewise for you. And yet, by turning over the job to professionals, to official agencies and the like you are giving up that right; a right which is also a privilege.

I know that most of you are experienced in the voluntary health movement. There are some however, who have forgotten the basic principles involved. There are some who have not heard the history of voluntarism in America. Therefore, in order to clarify my stand, and to perhaps enable you to understand my motive in bringing this message to you, I will first deal with fundamentals. A basic definition of voluntarism is "a system of supporting or doing anything by voluntary action." It is associated with freedom, "freedom of the individual, freedom of association, and freedom of enterprise." This freedom is basic to democracy and is incorporated in the spirit of philanthrophy and the meaning of voluntarism. This has been part of American behavior over the centuries.

As long ago as 1830, Alexis DeTocqueville marveled at the democracy of America which was busy developing associations in civil life. He felt that these associations succeeded in "proposing a common object for the exertions of a great many men and then inducing them to voluntarily pursue it." We joke today that when three people get together in this country they form an association of some type. This is true, this is good, and it can continue to be good. We have thousands of associations for almost every conceivable purpose; in business, in industry, in the professions, in the arts, in education and in health and welfare. Their purposes provide benefits for members, individuals, or even groups outside the specific associations by helping to meet needs or solving problems which the individual or group alone cannot handle. Since our society is becoming more complex these problems and needs are multiplied and their character is constantly changing.

In the individual, voluntarism has its deepest meaning. Voluntary effort in this country has been identified with humanitarian, religious and charitable traits of the American character.

I believe that many of you recall a world quite different, when a neighbor's concern for his neighbor was likely to be expressed through a direct type of personal relationship, or through the action of a small group of people on behalf of others. I think many of you recall just a few

*Presented to the Annual Awards Luncheon of Pulaski County, Arkansas; Division of the American Cancer Society on September 15, 1970, Little Rock, Arkansas and to the Southern Tuberculosis Conference on September 17, 1970, Memphis, Tennessee.

**Vice-President, Arkansas Division, American Cancer Society President, Southern Tuberculosis Conference.

years ago when a neighbor's house burned down, friends, relatives and neighbors brought goods and supplies, and even helped rebuild the house voluntarily. There was no thought of repayment or gratitude. In my area in the Ozark Mountains this type of neighborliness and friendliness is still being expressed in the voluntary efforts of good people doing things for other good people. When a family is in difficulty the neighbors pitch in and help with food, money, their own labor and service.

People still share illness, hard times and disaster, in the rural areas, as they did in urban areas years ago. Families were close and they were aware when help was needed by one of their members. Such opportunities to respond to the needs of others are definitely fewer today. Family ties are weakened, people move frequently and far away from relatives and home communities. Crowded urban living presents new stresses and strains which cause people to avoid rather than to seek out those in trouble. In other words, there is a tendency of not wanting to be involved. We have had many examples of this type of behavior today.

But, people still want to be helpful to less fortunate persons and they want to make some contribution to society. Therefore, they seek service to others through participation in voluntary philanthropic organizations. This program is their antidote for materialism and impersonality and serves as a major outlet for the desire to do good in the world.

The history of the voluntary health movement is a comparatively recent one. Except for the American National Red Cross, established in 1881, whose career has been a symbol of voluntary philanthropic effort, there were no agencies with voluntary programs before the turn of the century. Yet changes were taking place and people were ready for such development. Some associations for professional workers had existed prior to this time. These included the American Medical Association and the American Public Health Association and others which were formed before 1850. The professionals involved served as a nucleus for the formation of voluntary agencies. The National Tuberculosis Association was launched in 1904. This was followed by the National Society for the Prevention of Blindness, the American Social Health Association, the National Association for Mental Health, the American Cancer Society, the American Heart Association, the American Hearing Society and the National Society for Crippled Children and Adults; all formed before the end of the first quarter of the century. In 1938, the National Foundation For Infantile Paralysis was established. The 40's and 50's saw a renewed upsurge of activity with the organization of 20 or more national disease oriented agencies, many of which have become prominent. There are now more than 27 national voluntary health agencies which are most active.

Almost every one of the voluntary agencies were organized due to the pioneering conviction of one person. Clara Barton, of the American National Red Cross, is a prime example. Leadership in the attack come from the medical profession and from the public at large; the profession bringing technical knowledge but calling on the public at large for experience in social and educational processes.

The majority of national agencies were preceded by local or state groups which demonstrated needs on the local level and pointed to the existence of problems on a national scale. These state and local agencies are the affiliates of national organizations and they are active in policy making through representation by volunteer members of state or local boards of directors who serve on national boards. So we see that basically the organization of voluntary health associations as a whole, is a democratic process in which local opinion is reflected. The great strength of the national voluntary agencies lies in the volunteers, who know that the work they are doing is important, who serve on boards of directors and who serve as professional advisors on committees in fund raising and in service programs. Such volunteers number in the millions. The people who support the work of the agencies through financial contributions alone number in the tens of millions. Each volunteer then, has a stake in the program.

I believe that you are well aware that there is a rising tide of interest and concern on the part of the American people concerning health. Illness and disability have been the major cause of indigency in this country. Our voluntary agencies have a job to do and our volunteers still furnish the backbone of these agencies. Today more important than ever is the necessity for community effort for a broad offensive on the

research and educational fronts in order to advance knowledge of the causes and prevention of disease and disability and to disseminate this information so that communities can use it.

Remember always, that the national voluntary health agencies are governed by voluntary boards of trustees, which are elected by responsible membership bodies, and their principal support comes from voluntary contributions made by the public in response to organized fund raising campaigns. Remember then, that without the volunteers, such agencies cannot exist. The Board of Directors of the National Health Council has approved a statement on the roles of the national voluntary health agencies. These roles include: Humanizing: where citizens are sufficiently moved by the needs of people to work and to give help to meet these needs; Balancing: with respect to professional and volunteer efforts, by providing an opportunity for volunteers to take an active part in service programs; Sustaining: to provoke and sustain public support as necessary for health action; Stimulating and Initiating: involving freedom of organization and experimentation with new programs; Expressive: providing the individual with an opportunity to say "I care," and to find a suitable channel through which his concern for others can be expressed in tangible action. These roles serve to combat the depersonalizing influence of bigness and over-professionalization. The voluntary agency has a key role to play in bringing together the efforts of private and public agencies into a unified effective role.

Dr. Hollis Ingraham, former Commissioner of Health for the State of New York, felt that voluntary agencies "have special (even subtle) qualities that government agencies, by their very nature cannot possibly possess." He felt that the qualities that private agencies possess are six in number and they include people who are evangelists, crusaders, communicators, lobbyists, partners, and watch-dogs. I don't believe that these excellent virtues need elucidation, but I do get pleasure in going over them. I believe that we as volunteers are all evangelists. We like to talk about our programs. We like to proselyte and convince others that they are the best and we like to use testimony to indicate that the job we are doing is worthwhile. We are crusaders in that we like to try something new. Your volunteers are much more daring than your professional workers. They always feel that they have nothing to lose. If we make a tactical error we can say "Well at least we tried." All we can be accused of is good intentions. Volunteers are the best communicators of all. Their communication is by word of mouth; and all experts recognize that this is the best type of communication. We can talk to our neighbors over back yard fences. We physicians can speak to our patients, and the layman has an open forum in his business or profession. He can most certainly spread the word and he knows how to communicate. We volunteers are excellent lobbyists because we know that our representatives depend upon our votes. Every executive asks his volunteers to work with the members of his legislature, whether on a local, state or national level. No legislator can accuse a group of housewives or busy private citizens of attempting a bureaucratic power grab, or empire building.

Today we speak of a partnership for providing health planning and health services. Our federal government recognizes that there must be a partnership between the producer and the consumer of health care. No one is a greater consumer than the voluntary health worker. He is better educated in the needs that exist in his community than the average consumer. It is the participation of the volunteer citizen that provides the spark of community action and the spirit of community involvement. Voluntary workers make a project not only for the people, but truly of the people. Volunteers are the true watch-dogs. Their function is to guard public agencies. Volunteers serve no purpose in being constantly critical. Many of our public agencies must be protected from federal encroachment; and I am speaking of public agencies on the local and state level. Volunteers know as community leaders, what is expected of public services and they not only can demand them, but they can support them. If public officials receive the type of support that volunteers can knowledgeably provide, they in turn can give the volunteers the benefit of their knowledge. Then you have a partnership combination that is hard to beat: "The expert and the willing citizen."

There are few communities in the country today where needs are so adequately met that there is no place for additional citizen interest. Volunteers continue to play a major role in our

society in stimulating interest. Communities are being educated more and more to greater health concern and this education should provide scope for the expression of volunteer interest. The volunteer should both educate and play a part in participation.

For the future, volunteers continue to have a major role to play. The voluntary health movement in this country has provided thousands of communities across the nation with new and improved health services, rehabilitation centers and educational services. Now volunteers must be willing to support and improve our free institutions to give support to those in need.

Dr. Roger Egeberg, Assistant Secretary for Health of the Department of Health, Education and Welfare, at a recent international conference, stated that "the partnership between government and voluntary effort on the international, no less than on the domestic scene, is the key to progress in health." He felt that "what made the meeting important and special is that it was the product of voluntary citizen effort." He stated that the voluntary movement had "pioneered in areas where government had been inappropriate or slow, or timid. By mobilizing public opinion and stimulating citizen action it has created a favorable climate for government programs." Dr. Egeberg must have been a voluntary health worker at one time. He continued by stating that "Today, citizen involvement is more important than ever. It is much more than a matter of contributing dimes and dollars to a worthy cause. It is even more than contributing volunteer services, essential as that is. It involves participating and having a hand in the decision making process." He closed his talk by stating "but we will always need the commitment, the dedication and the zeal of voluntary effort."

Now, why have I presented to you this primer on the voluntary health movement in our country? As stated at the beginning, I am afraid that the professionals are taking over. By the professionals, I do not mean physicians; I mean the executives of voluntary health movements. I don't mean the executives are doing this voluntarily. We, as volunteers, are putting our problems more and more into the hands of the executive. I am alarmed at our tendency to let the executive prepare the agenda for a board meeting, then ask him his opinion of the items on the agenda, then agree to his decision and then leave, feeling that we have contributed to the program of a voluntary agency. I know that our executives want our opinions. They want our help so that they can truthfully say that their decisions are based upon board decision and board action.

We as volunteers must continue to play a part; and when I say "we" I do mean the physicians. I think that it is only right that the physician should be interested in the medical and research aspects of the voluntary movement. But, he should also be interested in how the organization that supports this movement functions. He should play an active part on its board of directors. He should be involved in the decision making. He should volunteer his personal finances and his personal services. The layman looks to the physician for professional guidance. He should also look to him for voluntary leadership.

I want to see our volunteers become the best educated professionals and laymen in the world today. I want them to be involved in every aspect of the voluntary health movement. I want them to provide the leadership and the humanity that is inherent in voluntarism. I heard a great churchman once say, "Government can provide food, bricks and mortar; but government cannot provide faith, hope and kindness." Let's not give the job to government by default.

Duodenal Ulcer as a Second Disease

R. R. Monson (Harvard School of Public Health, Boston 02115)

Gastroenterology 59:712-716 (Nov) 1970

The occurrence of coronary artery disease, chronic pulmonary disease, rheumatoid arthritis, and diabetes mellitus in a group of physicians with and without a history of duodenal ulcer was determined by mail questionnaire. Even after adjustment for cigarette smoking, physicians with ulcer reported significantly more chronic pulmonary disease than physicians without ulcer. They also reported more coronary artery disease and rheumatoid arthritis, but the excess was not statistically significant. There was no difference between physicians with and without ulcer in the reporting of a history of diabetes mellitus.

MEDICINE IN THE NEWS

THE MONTH IN WASHINGTON

The American Medical Association's 1971 Medicredit national health insurance program was introduced in both chambers of the congress with more than 100 Democratic and Republican sponsors.

The three chief sponsors again were Sen. Clifford Hansen (R-Wyo.) and Reps. Joel T. Broyhill (R-Va.) and Richard Fulton (D-Tenn.). They and Dr. Russell B. Roth, speaker of the AMA House of Delegates, held a joint news conference on capitol hill in connection with introduction of the legislation (H.R. 4960 and S. 987).

There are two major differences between this Medicredit legislation and the bill introduced last year. Catastrophic coverage has been added, and the peer review provision dropped because Congress is expected to approve such a program before considering national health insurance.

Medicredit would:

(1) pay the full cost of health insurance for those too poor to buy their own,

(2) help those who can afford to pay a part of their health insurance premium. The less they can afford to pay, the more the government would help out,

(3) see to it that no American would have to bankrupt himself because of a long-lasting, catastrophic illness.

The government would pay all of the premium for low-income beneficiaries — an individual and his dependents without any income tax liability. For others, the government would provide scaled participation ranging between 97.5 per cent and 10 per cent, favoring lower-income persons, in the payment of premiums for basic coverage. It would pay in full the premium for catastrophic expense coverage, but there would be a "financial corridor" based on income before such coverage would begin.

A beneficiary eligible for full payment of premium by the federal government would be entitled to a certificate acceptable by carriers for health care insurance for himself and his dependents. Eligible beneficiaries with whom the government would be sharing the cost of premium could elect between a credit against income tax or a certificate.

To participate in the Medicredit program, a carrier would have to qualify under state law, provide certain basic coverage, make coverage available without pre-existing health conditions, and guarantee annual renewal.

A qualified policy would offer comprehensive insurance against the ordinary and catastrophic expenses of illness. Basic benefits in a 12-month policy period would include 60 days of inpatient care in a hospital or 120 days in an extended care facility. Other basic benefits would provide emergency and outpatient services and all medical services provided by doctors of medicine or osteopathy. The catastrophic expense protection would pay incurred expenses for benefits in excess of the basic coverage, including hospital, extended care facility, inpatient drugs, blood, prosthetic appliances, and other specified services.

Under the basic coverage, there would be a deductible of $50 per hospital stay, and 20 per cent coinsurance of the first $500 of medical expense and on the first $500 of emergency or outpatient expenses. Under the catastrophic illness provisions, the amount of the "financial corridor" would be based on taxable income: 10 per cent on the first $4,000, 15 per cent on the next $3,000, and 20 per cent thereafter.

A health insurance advisory board of eleven members, a majority of whom shall be practicing physicians, and including the secretary of Health, Education and Welfare and the commissioner of internal revenue, would be appointed by the president with Senate consent. The board would establish minimum qualifications for carriers, and in consultation with carriers, providers and consumers, would develop programs designed to maintain the quality

of health care and the effective utilization of available financial resources, health manpower, and facilities.

At the news conference, Dr. Roth said:

"Medicredit offers four important benefits.

"It protects families and individuals from the financial catastrophe that can result from illnesses requiring protracted care.

"It enables people to receive *federal assistance* for health and medical care.

"It offers an individual or a head of a family, no matter what his income, the opportunity to select from among *private* medical plans the one best suited to his needs. If he does not like one plan, he can try another. In effect, Medicredit says to everyone, 'Here's some federal assistance. Take it and use it for the sort of health care you want.'

"And Medicredit provides these benefits at a cost estimated at $14.5 billion for the first year — considerably lower than nearly all other national health proposals. In other words, Medicredit will have a relatively modest impact on the tax increases necessary to finance any national health plan; it will thereby contribute less to the inflationary pressures which plague us all."

The three congressmen each keyed in on one of Medicredit's three main provisions.

"The current federal-state health program for the poor (medicaid) has been sick for a long time," Fulton said. "Some states offer good and adequate medical benefits, others offer substandard medical care and at least two states do not even participate in the program for their citizen poor. . . .

"The time has arrived to standardize the benefits in every state of the union guaranteeing to the poor of every state an adequate level of health care. The voucher system for the poor clearly states that the Federal Government will totally finance the cost of a basic, stated set of minimum benefits to the citizens of every state in the union."

"The tax credit feature of Medicredit is designed primarily to help low income families above the poverty level buy basic coverage health insurance," Broyhill said.

"By giving some tax credit to all taxpayers, the program will provide a strong incentive for all Americans to protect themselves with adequate health insurance.

"We believe that the tax credit provision is a much fairer and more equitable way of helping the near poor and middle income families pay for their health care than under medicaid. . . .

"This feature of Medicredit also will do away with the red tape and bureaucracy of the means test required under medicaid."

"Medicredit gives every American family the opportunity to protect itself against the cost of a catastrophic illness," Hansen said. "No family would face the prospect of losing its savings or even its home because of medical bills. . . .

"The Senate Finance Committee last year voted 13 to 2 — and I voted with the majority — in favor of a similar provision to protect all Americans against the cost of a catastrophic illness. I am confident that the congress will enact such legislation during this session."

It was pointed out that Medicredit deliberately was limited to financing of health care so that it would not be bogged down in details.

"Medicredit was designed to solve the most immediate and most obvious problem relating to medical and health care: making it possible for everyone to seek the attention he needs without regard to his ability to pay," the AMA said.

"However, through the AMA and many others with whom it is consulting, a package of companion programs is now in preparation to help the medical profession, its allies, the government and the people of the nation solve jointly many of the other health-oriented problems facing our nation.

"Those programs will deal with such longer-range problems as the quality of medical and health care, the most efficient utilization of medical and health personnel, the need for additional manpower, the distribution of manpower, the cost of providing care and the need for custodial and home care for the elderly and disabled."

A week before introduction of the Medicredit legislation, President Nixon outlined the Administration's national health insurance program in a special message to Congress.

"Nineteen months ago, I said that America's medical system faced a 'massive crisis'," he said. "Since that statement was made, that crisis has deepened. All of us must now join together in a common effort to meet this crisis — each doing his own part to mobilize more effectively the enormous potential of our health care system."

The Administration program includes a National Health Insurance Standards Act which would require employers to provide basic health coverage for their employees. The minimum benefits would include hospital and physician care, full maternity care, well-baby care, laboratory expenses and certain other expenses. There would be certain deductibles and coinsurance.

The minimum program would also provide at least $50,000 in coverage for each family against the costs of catastrophic illness. Under this program employees could elect to be enrolled in a Health Maintenance Organization rather than receive the basic coverage through private carriers. The program would be paid for by the employer, 65 per cent for the first two and one-half years, 75 per cent thereafter, and the employee, 35 per cent and 25 per cent. There would be no cost to the federal government.

A second Administration proposal would provide a Family Health Insurance Plan to replace medicaid for poor families. The program would be financed and administered by the federal government. It would provide health insurance to all poor families with children headed by self-employed or unemployed persons whose income is below a certain level, $5,000 for a family of four. The program would pay all medical costs for families with income below a certain level, $3,000 for a family of four. As income increases, the family would begin to pay part of the costs through a graduated schedule of premiums, deductibles, and coinsurance.

In order to encourage states to use medicaid funds made available by this bill to supplement the basic program, the federal government would bear the costs of administering a consolidated federal-state benefit package. The program would become effective July 1, 1973 and would cost an estimated $12.4 billion.

Dr. Walter C. Bornemeier, president of the AMA, commended the Nixon Administration for developing "statesman-like" health proposals. He said that, "in overall philosophy and approach," there was "a great deal of common ground" between Medicredit and the Administration program.

"The whole idea of removing the economic barriers to health care for the poor and near-poor has been AMA policy for same time," Dr. Bornemeier said.

"On the matter of insurance against the catastrophic expenses of a long, protracted illness — a medical-health bill that can pauperize a family — we are again agreed in principle.

"The proposal for health insurance to be purchased on a mandatory basis mainly by employers for their employees is an intriguing one. . . .

"We are going to have to take a more detailed look at the proposals on health maintenance organizations (HMO's). Although the Nixon approach is an optional approach, both to doctors and to patients, we are not sure that HMO's represent real solutions to current medical problems. We feel they should be tried on a demonstration basis, and thoroughly researched — as should a number of other delivery methods."

ARKANSAS STATE CANCER COMMISSION

Little Rock, Arkansas

March 23, 1971

Arkansas Medical Society
P. O. Box 1208
Fort Smith, Arkansas 72901
Attention: Jack W. Kennedy, M.D., President
Mr. Paul C. Schaefer,
Executive Vice President

Dear Doctors:

Members of the Arkansas State Cancer Commission took official recognition of the Arkansas Medical Society and the contribution of its membership to the Cancer Program of Arkansas at the Commission's March 18, 1971, meeting.

At that time the Commissioners requested this letter of appreciation be directed to the Society for presentation at its 1971 Annual Session, April 25-28, 1971, Hot Springs.

Countless hours have been contributed on a voluntary basis without remuneration by the medical profession in Arkansas, staffing tumor clinics for medically indigent cancer patients to receive diagnosis, treatment and care without cost to the patient. This philosophy, projected by leaders in the Medical Society, has made assistance possible for thousands of patients since 1945, when the State Cancer Commission was established by Act 277 of the 1945 General Assembly as the Official Agency for Cancer Control.

Reckoned in monetary value, services contributed by the doctors of Arkansas have sur-

passed state and federal funds, appropriated by the State Legislature for Cancer Control over the past 25 years.

Attached is a copy of House Concurrent Resolution No. 27 of the 1971 General Assembly, Commending the Arkansas State Cancer Commission and its Director. Therein tribute is paid to members of the medical profession and to the three part-time Medical Directors, who have served without remuneration. The Resolution also states that the State Cancer Commission has been abolished by Act 38 of 1971 with the responsibility for the Cancer Control Program transferred to the Division of Chronic Disease under the Department of Health.

Publication of Resolution No. 27 of 1971 and this letter in the Journal of the Arkansas Medical Society will be appreciated by the present and last State Cancer Commission.

Sincerely yours,
/s/ Frank G. Kumpuris
Frank G. Kumpuris, M.D.
Secretary and Medical Director

FGK:deb
Attachment
CC: Alfred Kahn, Jr., M.D., Editor, Journal of the Arkansas Medical Society
Members, Arkansas State Cancer Commission

H. C. R. No. 27
(Kizer, Sheid)

COMMENDING the Arkansas State Cancer Commission and Its Director.

WHEREAS, the Arkansas State Cancer Commission was established as the official State agency for Cancer Control by Act 277 of 1945, as amended by Act 51 of 1963, and

WHEREAS, the State Cancer Commission's statewide program and orientation to community needs, although limited by funds and personnel, has been effective for 25 years, providing leadership, sponsorship, and financial assistance for case finding, diagnoses, treatment and rehabilitation in the control of cancer in Arkansas; and

WHEREAS, the State Cancer Commission has sponsored tumor clinics staffed by members of the medical profession on a voluntary basis for medically indigent cancer patients to receive diagnosis, treatment and care without cost to the patient; and

WHEREAS, the State Cancer Commission has sponsored the development of hospital cancer registries and a State Cancer Registry to provide statistical data for improved patient care with systematic follow-up of cancer patients, for continuing professional and lay education, and for cancer research; and

WHEREAS, the State Cancer Commission has assisted general hospitals to attain and retain requirements of the American College of Surgeons for an approved hospital cancer program; and

WHEREAS, the State Cancer Commission recommended significant legislation for the cancer registry program in Arkansas, Act 222 of 1969, providing that any information, data and reports received by the Arkansas Regional Cancer Registry (State Registry) or any hospital cancer registry shall be used for statistical, scientific and medical research; and providing that no person furnishing such information shall be liable in damages for betrayal of a professional secret and for other purposes; and

WHEREAS, the State Cancer Commission has received national recognition for the Handbook for the Arkansas Regional Cancer Registry and Hospital Cancer Registries in Arkansas, January 1970, developed by the Director and her staff; and

WHEREAS, the State Cancer Commission has been the coordinating agency for Cancer Control in Arkansas with cooperative liaison between related official, voluntary and professional agencies and organizations; and

WHEREAS, the State Cancer Commissioners have served without per diem or remuneration, and the three elected Commission Secretaries, Dr. Carl A. Rosenbaum, Dr. W. R. Brooksher, and Dr. Frank G. Kumpuris, have served as Medical Directors during their terms of office on a voluntary part-time basis; and

WHEREAS, the present and only Director for the State Cancer Commission, Lucy R. Utterback, has served since January 1, 1947, with dedication and proficiency; and

WHEREAS, the State Cancer Commission has been abolished by Act 38 of 1971 with the responsibility for the Cancer Control Program transferred to the Division of Chronic Disease under the Department of Health,

NOW THEREFORE, Be It Resolved by the House of Representatives of the Sixty-Eighth

General Assembly of the State of Arkansas, the Senate Concurring Therein:

SECTION 1. That the Arkansas State Cancer Commision and its Director are hereby commended for their outstanding and worthwhile contributions in the area of cancer control, treatment, diagnosis and education.

SECTION 2. That a copy of this Resolution shall be furnished to each member of the Arkansas State Cancer Commission and to its Director by the Chief Clerk of the House of Representatives.

(1971 Regular Session)

COUNCIL MINUTES

March 21, 1971

The Council of the Arkansas Medical Society met at 12:00 noon on Sunday, March 21, 1971, in the Sam Peck Hotel, Little Rock.

Present were: Long, Kennedy, Applegate, Shuffield, Hawkins, Saltzman, Fairley, Raney, P. Gray, Irwin, Lazenby, Duzan, Wynne, Harris, Bethel, Kolb, Orr, Henry, Kirby, Koenig, Chudy, P. Smith, Hyatt, Whittaker, Thomas, Fowler, Verser, Ellis, Edgar Easley, John Herron, Charles Silverblatt, George Mitchell, Winston Shorey, A. C. Bradford, Roger Bost, Guy Farris, Francis Henderson, Mr. Ed Rensch, Mr. Paul Harris, Mr. Leon Swatzell, Mr. Bill Colley, Mr. Warren, Mr. Schaefer, Mr. Berry, and Miss Richmond.

The Council transacted business as follows:

I. Mr. Schaefer reported briefly on the Peer Review Conference in New Orleans attended by him and Dr. Wilkins.

II. Chairman Long called the attention of the Council to the report of Ben Saltzman on the Environmental Health Conference he attended in San Antonio in January.

III. Upon the motion of Wynne and Koenig, the Council voted to co-sponsor a series of seminars at various Arkansas colleges and universities to be conducted by the AMA Council on Foods and Nutrition. No expense or work by the Arkansas Medical Society is involved.

IV. Chairman Long reminded Council members of vacancies to be filled during the annual session and urged them to be giving thought to nominees.

V. Mr. Leon Swatzell, AMA Field representative, and Mr. Bill Colley of the AMA Washington Office, presented information on the AMA's "Medicredit" plan. Upon the motion of Hawkins and Orr, the Council voted to support the proposal.

VI. Upon the motion of Wynne and Saltzman, the Council voted to send $10 and a letter of apology to Congressman Pryor for an incident occurring at the Society's 1970 winter meeting.

VII. C. R. Ellis, a member of the Society's Committee on Medicine and Religion, reported briefly on a Medicine and Religion Conference which he attended recently in Chicago. Dr. Ellis noted that physicians need to work more closely with clergymen. He recommended that a booth at the State Society meeting would be helpful in promoting Medicine and Religion liaison. Upon the motion of Saltzman and Kennedy, the Council voted to go on record as approving such a booth, provided space is available and details can be worked out by the committee.

VIII. The chairman requested the feeling of Council members about holding another meeting prior to the convention. It was the consensus that no meeting should be held unless some emergency arises which the chairman feels necessitates a meeting.

IX. Upon the motion of Saltzman and Applegate, the Council approved the annual report of audit.

X. Upon the motion of Orr and Koenig, the Council authorized the executive vice president to purchase certificates of deposits from banks or federally-insured savings and loan associations up to the amount of federal insurance.

XI. Upon the motion of Shuffield and Applegate, the Council voted to commend Mr. Schaefer on his excellent handling of Society funds.

XII. Charles Silverblatt, coordinator of the Arkansas Regional Medical Program, presented information on an application being made by RMP and Comprehensive Health Planning for a grant for an "Experimental Health Services Planning and Delivery System for Arkansas." The

proposal was also discussed by Jack Kennedy and Francis Henderson. After lengthy discussion, and upon the motion of Bethel and Orr, the Council voted to recommend and endorse continuation of dialogue with the Regional Medical Program on the plan.

XIII. A. C. Bradford, chairman of the Public Relations Committee, reported on the progress of the Society's drug abuse educational program.

XIV. 1. Upon the motion of Saltzman and Kirby, the Council voted to select two physicians to assist the State Department of Education with its drug abuse educational program by appointing two physicians to serve on a committee of consultants for reviewing a statewide drug education curriculum guide now under development.

2. Upon the motion of Shuffield and Koenig, Payton Kolb and A. C. Bradford were unanimously elected as the two consultants.

XV. Chairman Long advised the Council that Geigy Pharmaceutical Company had offered to arrange and underwrite a symposium on malpractice for members of the Society. Upon the motion of Koenig and Thomas, the Council voted to thank Geigy for their offer and to advise them that we are unable to work the symposium into the calendar of Society activities.

XVI. Chairman Long advised that a National Conference on Peer Review would be held in Chicago May 21-22. Upon the motion of Kolb and Kirby, the Council voted to send a representative to the conference.

XVII. Elvin Shuffield, chairman of the Legislative Committee, spoke briefly regarding Senate Bill 421, a Society-endorsed bill to provide for licensing of osteopaths after a year of internship in an AMA approved hospital. Roger Bost presented a proposal for an amendment to legislation now before the Legislature which would extend qualifications to those having completed a one-year internship within the past five years in a hospital approved by the American Osteopathic Association or to those having completed a one-year internship and at least one additional full year of post doctoral training in a hospital approved by the American Osteopathic Association. There was considerable discussion regarding the various legislative proposals. Upon the motion of Raney and Bethel, the Council voted to go on record as supporting Senate Bill 421 and, at present, opposing Senate Bill 326. If physicians conferring with Governor Bumpers come away recommending that we then support compromise legislation, the matter is to be reconsidered.

XVIII. Ross Fowler reported on the initial meeting of his committee to work with the Medical Center on problems between the Center and the Society. It was the consensus of the Council that a report from the committee should be referred for consideration by a reference committee at the Annual Session.

XIX. Chairman Long reviewed history of the resolution from the Union County Medical Society with regard to medical ethics involved in third party situations. Upon the motion of Koenig and Saltzman, the Council directed that a letter be drafted by the Society attorney to Union County to explain the relationship between present law and the AMA Code of Ethics.

Approved: C. C. Long, M.D.
Chairman of the Council

PROCEEDINGS OF SOCIETIES

Miller County Elects Officers for 1971

Officers for the Miller County Medical Society for 1971 have been elected as follows: Dr. Karlton H. Kemp, president; Dr. N. L. Rodgers, president-elect; and Dr. Robert H. Chappell, secretary-treasurer.

PERSONAL AND NEWS ITEMS

Current Therapy, 1971, published by Saunders and edited by Dr. Howard F. Conn, has a section on enuresis written by Dr. James W. Headstream.

Dr. D. L. Cohagan Guest Speaker

"Better Health After Forty" was the theme of a meeting held in March at the Bentonville Fairgrounds Auditorium. The featured guest was Dr. D. L. Cohagan, who spoke on diet, exercise, regular checkups, and their relationship to healthful longevity.

Dr. Charles Reid Honored By Blue Cross-Blue Shield

Dr. Charles Reid of Pine Bluff, who served on the Board of Trustees of the Arkansas Blue Cross-Blue Shield for six years, has been awarded a plaque in recognition of his service. Dr. Thomas E. Townsend of Pine Bluff was elected to a six-year term on the board, succeeding Dr. Reid. Dr. J. P. Price of Monticello was named vice chairman of the board.

Dr. Hayes Guest Speaker At Women's Chamber of Commerce Meeting

Dr. Harry Hayes, Jr., of Little Rock was the guest speaker at the March dinner meeting of the Women's Chamber of Commerce of that city. Dr. Hayes spoke on "Current Trends in Cosmetic Surgery" and illustrated his talk with color slides.

Dr. Fred Gordy, Jr. Honored By Arkansas Golf Association

In recognition of his outstanding work with the State's junior golf program during the past ten years, the Board of Directors of the Arkansas Golf Association recently named the Arkansas' junior match-play golf champion trophy in honor of Dr. Fred Gordy, Jr., of Conway. The large permanent trophy, to be known as the Fred Gordy trophy, will be retained for one year by the tournament winner. A miniature replica of the permanent trophy will be presented to the winner. Dr. Gordy, who has been a low handicap golfer for twenty-five years, is a director of the Arkansas Golf Association.

Dr. Parkerson Reports Theft

Dr. Carl R. Parkerson of Hot Springs recently reported the theft of his medical bag from his car which was parked at a local hospital.

Dr. William N. Jones Presides At Dermatologists Meeting

The Arkansas Dermatological Society held its annual meeting in mid-March at the University of Arkansas Medical Center. Dr. William N. Jones of Little Rock, president of the Society, was in charge of arrangements. The Davis W. Goldstein Lecture was presented by Dr. Harold O. Perry, a member of the Department of Dermatology at the Mayo Clinic in Rochester, Minnesota.

Dr. A. T. Walker To Relocate

In early April, Dr. A. T. Walker joined physicians in practice at the Salem Clinic in Salem. Previously, Dr. Walker was in general practice at Mammoth Spring.

Two Society Members Installed As Fellows

Drs. Nancy Rabon of Fayetteville and E. Stewert Allen of Little Rock were installed as Fellows of the American College of Obstetricians and Gynecologists at its annual meeting, May 2-6, in San Francisco.

Drs. Teeter and Kolb Speak At Athletic Trainers Clinic

Dr. Stanley Teeter of Russellville and Dr. James Kolb of Clarksville were speakers at the second annual athletic trainers clinic held recently at Arkansas Tech. Dr. Teeter spoke on head, chest and abdominal injuries and Dr. Kolb spoke on ligament injuries.

Dr. Workman Appointed To Board

Dr. W. W. Workman of Blytheville has been appointed to the State Tuberculosis Sanatorium Board for a term to expire in 1978.

Doctors Attend West Indies Seminar

Drs. Hal Barre, Thomas DeClerk and W. W. Scott, all of Pocahontas, were among fifty doctors of the tri-state area who recently attended "A Seminar In The Sun" which was held at Montego Bay, Jamaica. The seminar, directed by Dr. Braudes of the Southern California Medical Center, was on "Current Concepts in the Treatment of Infectious Disease".

Dr. Clark Certified As Diplomate

Dr. Curtis B. Clark of Sheridan has been certified as a Diplomate of the American Board of Family Practice.

Dr. Martin Attends Coronary Course

Dr. David Martin of Harrison attended a coronary care post-graduate course conducted at the University of Arkansas Medical Center in March. The course emphasizes new approaches to diagnosis and treatment of heart disease.

Dr. Bost Appointed Director of Rehabilitative Services

Dr. Roger Bost of Little Rock has been appointed director of the newly created Department of Social and Rehabilitative Services for the State of Arkansas. The Department is responsible for the Welfare Department, the two State hospital units, the Department of Mental Retardation, the Rehabilitation Services, the Rehabilitation Services for the Blind, the juvenile training schools, the Commission on Alcoholism, the Workmen's Compensation Commission and the Office on Aging. Dr. Bost is taking a leave of absence from the University of Arkansas Medical Center where he was professor and acting chairman of the Department of Pediatrics.

THINGS TO COME

Training Workshop In Clinical Hypnosis And Hypnotherapy To Be Held

The American Society of Clinical Hypnosis-Education and Research Foundation will conduct a training workshop June 4, 5, and 6 in Clinical Hypnosis and Hypnotherapy at the Western Hills Motor Inn in Shreveport, Louisiana. The faculty will be composed of physicians, dentists, and psychologists highly qualified to provide this specialized training in hypnotherapy. A basic session only, it will be open to registration by physicians, dentists, and psychologists. The tuition fee will be $115.00.

For additional information contact: Mr. F. D. Nowlin, Executive Secretary, The American Society of Clinical Hypnosis, 800 Washington Avenue Southeast, Minneapolis, Minnesota 55414.

Summer Program In Human Sexuality, July 11-22, 1971

Lecture courses with special reference to the medical aspects of human sexuality, workshops in sex education and counseling, small group discussions. $325, includes housing. Registration ends May 30th.

Write: Summer Program, Institute for Sex Research, Indiana University, Bloomington, Indiana 47401.

Medical Mycology Course Offered

A course in Medical Mycology will be held at the University of Arkansas School of Medicine, Department of Microbiology, August 23 through September 10th. Dr. Hilliard F. Hardin of the Veterans Administration Hospital and the Department of Microbiology, UAMC, will teach the course. The fee for the course will be $45.00. Enrollment will be limited to 50 students.

Application forms and additional information can be obtained from: Department of Microbiology, University of Arkansas School of Medicine, 4301 West Markham, Little Rock, Arkansas 72201.

Woman's Auxiliary

In observance of Doctor's Day, the Woman's Auxiliary to the Garland County Medical Society entertained members of the Society at a dinner at the home of Dr. and Mrs. John Dodson. Mrs. L. O. Bohnen assisted Mrs. Dodson in hostessing the dinner.

Members of the Auxiliary served coffee and doughnuts to the physicians at St. Joseph's and Ouachita Hospitals on Tuesday.

NEW MEMBERS

Dr. Marion A. McDaniel

Dr. Marion A. McDaniel is a new member of the Phillips County Medical Society. Dr. McDaniel was born in Helena. His pre-medical education was received from the Memphis State University, Memphis, Tennessee, where he graduated in August, 1965 with a B.S. degree. He attended the University of Tennessee College of Medicine in Memphis and was graduated in 1969. His internship was served at the City of Memphis Hospitals from January to December, 1970.

Dr. McDaniel was in the United States Air Force from 1956 to 1960.

His office, for the general practice of medicine, is located at 513 Porter Street, Helena.

Dr. James Mark Carter

Dr. James M. Carter, a native of Camden, Arkansas, is a new member of the Pope-Yell County Medical Society.

After graduating from the Little Rock University in 1962, he attended the University of Arkansas School of Medicine and was graduated in 1966. He then served in the United States Navy from 1966 to 1970. Dr. Carter interned at the United States Navy Hospital in Charleston, South Carolina.

Since the first of the year, Dr. Carter has been in the general practice of medicine at the Millard-Henry Clinic in Russellville.

Dr. Thomas L. Hansen

Another new member of the Pope-Yell County Medical Society is Dr. Thomas L. Hansen.

Dr. Hansen, who is originally from Seward, Nebraska, attended Oklahoma State University in Stillwater, Oklahoma, from which he was graduated with a B.S. degree in 1958. He received his medical education at the University of Oklahoma School of Medicine in Oklahoma City and was graduated in 1966. Dr. Hansen interned at Baptist Memorial Hospital in Oklahoma City and completed a residency in internal medicine at St. Anthony's Hospital, also in Oklahoma City.

Dr. Hansen received his discharge in 1969 from the United States Army Reserve, after having served as a member for ten years.

Dr. Hansen is a specialist in internal medicine. He is associated with the Millard-Henry Clinic in Russellville.

Dr. James S. Beckman

Dr. James S. Beckman is a new member of the Pulaski County Medical Society.

He was born in Fort Smith, Arkansas. Dr. Beckman received a B.A. degree from the University of Arkansas in Fayetteville in 1965 and was graduated from the University of Arkansas School of Medicine in Little Rock in 1970.

Upon completion of his internship at St. Vincent Infirmary in Little Rock in May 1971 Dr. Beckman will begin a residency in orthopedics at the University of Arkansas Medical Center.

Dr. Kenneth Meacham

Another new member of the Pulaski County Medical Society is Dr. Kenneth Meacham, a native of Monett, Arkansas.

He received his pre-medical education at Arkansas State College in Conway, and in June of 1969, he graduated from the University of Arkansas School of Medicine. Dr. Meacham is presently a urology resident at the University of Arkansas Medical Center, Little Rock.

Dr. Don Setliff

Dr. Don Setliff is a new member of the Pulaski County Medical Society. He was born in Magnolia, Arkansas, and attended the University of Arkansas at Fayetteville, where he graduated with a B.S. degree. In 1970, he received his M.D. degree from the University of Arkansas School of Medicine in Little Rock. He is now serving his internship at University Hospital.

Dr. Allan S. Pirnique

The Union County Medical Society has announced that Dr. Allan S. Pirnique has been accepted for membership. He is a native of Little Rock, Arkansas.

Upon graduating from the University of Arkansas School of Medicine in 1964, Dr. Pirnique interned at the Detroit Receiving Hospital, De-

troit, Michigan. From 1965-1967, he was on active duty with the United States Navy Reserve. In 1967, he began a residency in internal medicine at the University of Arkansas Medical Center, Little Rock, which he completed in 1970. Since the latter part of 1970, Dr. Pirnique has been in the practice of internal medicine at 714 West Faulkner in El Dorado.

OBITUARY

Dr. Severn Teakle Wallis Cull

Dr. Severn Teakle Wallis Cull died in Little Rock on March 25th at the age of 78. He was born in Frederick, Maryland.

Dr. Cull was a graduate of Princeton University and the Johns Hopkins Medical School. He did his internship and residency at Johns Hopkins Hospital and later did graduate study in Vienna.

Dr. Cull moved to Little Rock in the early 1920's and became associated with the late Drs. Ogden, Judd, Scarborough and Moore in the founding and operation of the Trinity Hospital which was located at 2000 Main Street. He joined the staff of the University of Arkansas Medical School in 1928 as a professor of therapeutics and was appointed professor of medicine in 1946. Dr. Cull retired in the early 1960's after having practiced medicine for forty years.

Dr. Cull is survived by one sister, Mrs. Sara Cull Hume, of Baltimore, Maryland.

Dr. Elmer Glenn Wakefield

Dr. Elmer Glenn Wakefield, a native of Nashville, Arkansas, died on March 9th in Texarkana, where he had lived since retiring ten years ago. He was 74.

After receiving his B.S. degree from the University of Arkansas in 1921, Dr. Wakefield entered Johns Hopkins University School of Medicine, where he received his M.D. degree in 1925. He was appointed to the staff of the Mayo Clinic in 1930, where he served as associate in medicine. During the early years of his career, Dr. Wakefield interned at the United States Naval Hospital and later was assistant surgeon in the United States Public Health Service at Ellis Island in New York City. He was appointed to the staff of the Mayo Clinic in 1930. He was named Associate Professor of Medicine at Mayo in 1945.

Dr. Wakefield was a member of the Arkansas and Miller County Medical Societies, the American Medical Association, Member Emeritus of the Mayo Clinic Staff, a member of the Mayo Foundation, the Central Society for Clinical Research, the American Society for Clinical Investigation, Kappa Sigma, and a diplomate of the National Board of Medical Examiners.

Dr. Wakefield is survived by his wife, Velma, and one brother.

Necrotizing Angiitis in Drug Addicts

B. P. Citron et al (2025 Zonal A, Los Angeles 90033)

New Eng J. Med 283:1003-1010 (Nov. 5) 1970

Fourteen young drug addicts with necrotizing angiitis indistinguishable from periarteritis nodosa have been studied. The six women and eight men had used narcotics, stimulants, hallucinogens, and depressants. Methamphetamine, alone or in combination with heroin or D-lysergic acid diethylamide, was used commonly. The patients' clinical presentation varied from a complete lack of symptoms in five patients to pleomorphic systemic signs and symptoms with renal failure, hypertension, pulmonary edema, and pancreatitis. The vascular changes of necrotizing angiitis including arterial aneurysms and sacculations were noted in the kidney, liver, pancreas and in the small bowel at selective angiography. Postmortem findings in four patients revealed generalized vascular changes of differing age including chronic and healed lesions. Because of the multiplicity of injected substances with the high probability of contamination, the exact etiologic agent is not clear.

TUBERCULOSIS ABSTRACTS

Sponsored by Arkansas Tuberculosis and Respiratory Disease Association

RIFAMPIN IN THE TREATMENT OF DRUG-RESISTANT TB

Study of 30 patients with advanced cavitary TB shows that rifampin is extremely useful in retreatment programs in which it is combined with one or more effective antituberculosis drugs. Monotherapy courts failure.

Rifampin, a semisynthetic, orally-administered derivative of rifamycin SV, has been found in clinical trials in the United States and Europe to be active against many microorganisms, including tubercle bacilli. The present report summarizes the results obtained from rifampin chemotherapy of four- to 14-month duration in 30 patients with far-advanced multiple-drug resistant cavitary tuberculosis. Most had multiple cavities ranging in size from two to 11 cm: average was 5.5 cm.

Under previous chemotherapeutic regimens some of the 30 patients had cultures demonstrating resistance to as many as ten antituberculosis drugs. All but one were found to be resistant to at least three drugs. That one patient manifested multiple-drug allergies.

All had positive sputum cultures for *M. tuberculosis* within 30 days before or after the beginning of retreatment with rifampin. In each, rifampin sensitivity was demonstrated in vitro before therapy was begun.

The 30 TB patients were given 600-mg. doses of rifampin daily. Initially, concomitant drug therapy was limited to either isoniazid (INH), para-aminosalicylic acid (PAS), streptomycin, and ethambutol — or a combination of these drugs — even though no in vitro susceptibility to these drugs was demonstrable. Subsequently, as additional data became available, each patient received one or more drugs to which in vitro susceptibility had been demonstrated.

No patient received rifampin alone. However, 17 patients were given rifampin in conjunction with other drugs to which in vitro resistance had already been demonstrated in retreatment studies. These patients were considered to have received rifampin "monotherapy."

Sputum specimens were collected for culture and direct susceptibility tests on 7H11 agar medium at least once a week. Culture conversion was reckoned from the date the first of a series of negative sputum cultures was obtained.

Relapse was defined as the occurrence of a positive sputum culture after at least three months of consistently negative cultures. Positive cultures of patients under treatment were periodically subcultured on 7H11 medium containing concentrations of 1.0, 5.0, and 10.0 μg. of rifampin per ml. to identify the emergence of resistance.

In the present series *pretreatment* strains of *M. tuberculosis* were sensitive to 0.5 μg. of rifampin per ml. *in all but one patient.* In that patient, tubercle bacilli were susceptible to 2.0 μg.

No toxicity attributable to rifampin was noted in this series.

Twenty-one patients (70%) achieved quiescent status on retreatment with rifampin and remained so at the time of this report. The shortest duration of rifampin therapy producing sputum conversion was eight days; the longest, 90 days. Average was 40 days.

There were 13 who received concomitant chemotherapy with one or more antituberculosis drugs to which in vitro susceptibility was demonstrated in pretreatment cultures. Twelve of these patients (92%) had achieved and maintained negative-culture status. This group required an average of 33 days of combined chemotherapy for culture conversion.

This compares with the achievement of quiescent status in 11 (65%) of the 17 "mono-

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A. Vall-Spinosa, M.D.; William Lester, M.D.; Thomas Moulding, M.D.; Paul T. Davidson, M.D.; J. K. McClatchy, Ph.D. *The New England Journal of Medicine,* September 17, 1970 (Vol. 283, No. 12).

therapy" patients who were resistant to all drugs except rifampin. To date, only two of these patients have relapsed, leaving an overall success rate of nine out of 17 (53%).

There were nine treatment failures: eight among the "monotherapy" group and only one in the combined-therapy group. Seven patients failed to convert to negative cultures. The other two relapsed after 97 and 154 days, respectively. In both, the sputum cultures showed rifampin resistance from the date of relapse.

All failures demonstrated the "fall-and-rise" phenomenon, with colony and bacillary counts dropping at the start of therapy and then rising again as failure became evident.

CAUSES OF TREATMENT FAILURE

Failures in this study were closely analyzed in an effort to determine the cause. Silicosis, bronchopleural fistula, and empyema were notable adverse prognostic factors. High bacillary and colony counts, especially if associated with multiple-drug resistance, clearly appeared to predispose to failure. Such cases warrant most intensive chemotherapy and the utmost care in the selection of a regimen of maximum efficacy. This study reaffirms the finding that monotherapy courts a 50% rate of failure.

The results of this study, as well as all other reported trials, indicate that rifampin is a safe and very effective antituberculosis drug. However, its proper use is subject to the basic principle determining effective antituberculosis treatment. That is, no single agent can be expected to control cavitary pulmonary tuberculosis unless it is used in combination with one or more other effective drugs. Monotherapy appears to trigger bacterial resistance to the drug.

Therefore, the use of a single drug in patients with drug-resistant infection should be avoided whenever possible.

CONCOMITANT THERAPY

At the same time, the study indicates that the continued use of isoniazid or other antituberculosis drugs in the presence of demonstrable resistance is ineffectual. Therefore, it is strongly recommended that retreatment regimens include drugs that are demonstrably effective on in vitro studies.

Since no toxicity to rifampin was detected, it seems likely that it can be combined with other antituberculosis drugs without appreciable added risk. The combination of rifampin and isoniazid has been shown to be particularly effective. Thus, rifampin is emerging as another important drug for the management of patients who may require ambulatory chemotherapy on initial treatment. The potential availability of an oral ambulatory antituberculosis program based on isoniazid, ethambutol, and rifampin, should effectively solve treatment problems in areas where hospital resources are unavailable. However, additional studies are needed to determine the mechanics of such a program. The high cost of rifampin remains a major problem.

The development of rifampin is a major advance in antituberculosis chemotherapy — especially in retreatment programs of drug-resistant patients. It should be evaluated most carefully and scientifically, however, lest it be squandered in ineffectual regimens, such as single-drug regimens which would trigger resistance to it.

Hemodynamic Changes, Treatment, and Prognosis in Clinical Shock

R. F. Wilson (1326 St. Antoine St, Detroit 48226), E. J. Sarver, and J. Rizzo

Arch Surg 102:21-24 (Jan) 1971

The relationship between cardiac output, total peripheral resistance, treatment, and prognosis was evaluated in 151 patients treated in a hospital shock unit. Although the hemodynamic values did not correlate with the severity of the shock and did not have a significant effect on the outcome, the drugs used and the response to treatment were critical. Drugs which maintained or increased any hemodynamic abnormality were detrimental. There was a significant increase in mortality rate when vasoconstrictor drugs were used in patients who had a cardiac output less than 2.5 liters/min/sq m and were vasoconstricted above 2,2000 dyne-sec/cm^5/sq m. The use of vasodilators in septic patients, especially those with cardiac output above 3.5 liters/min/sq m and vasodilation less than 1,300 dyne-sec/cm^5/sq m, was also associated with a significantly increased mortality rate. Although an initial low cardiac output in itself was not detrimental, if it persisted below 2.0 liters/min/sq m in spite of treatment, the mortality rate was 75%.

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(O) Original Articles; (SP) Special Articles; (BR) Book Review; (E) Editorial; (OB) Obituary; (R) Resolution

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